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ABSTRACT

Presenting a wide array of Internet addresses and sample lessons, this book shows how teachers can integrate the Internet into their K-12 curriculum to actively involve students. The ideas and lessons in the book help students to communicate with people in faraway places; gather information from around the globe; develop sophisticated research skills; increase knowledge across the curriculum; strengthen creative abilities; develop fluency in keyboarding, reading, and writing; and engage in both cooperative and independent learning. Topics covered in the book include e-mail, Netscape, megapages, Gopher, FTP, Telnet, and HTML. Chapters in the book are: (1) What Is This Thing Called "the Internet"?; (2) E-pals and Keypals; (3) Netscaping; (4) Surfin' the Megapage; (5) Just for the Little Kids; (6) Go for Fables, i.e. Gopher Fables; (7) FTP=Fairy Tales Please; (8) A Book an Hour; (9) Telnet, Anyone?; (10) Searching; (11) The ABCs; (12) A Whale of a Time; (13) The News; (14) Get a Job!; (15) Look Who's Talking; (16) Virtually Together in D.C.; (17) Games People Play; and (18) HTML and YOU. A 30-item select bibliography and information on 6 commercial on-line services in the United States and Canada are attached. (RS)

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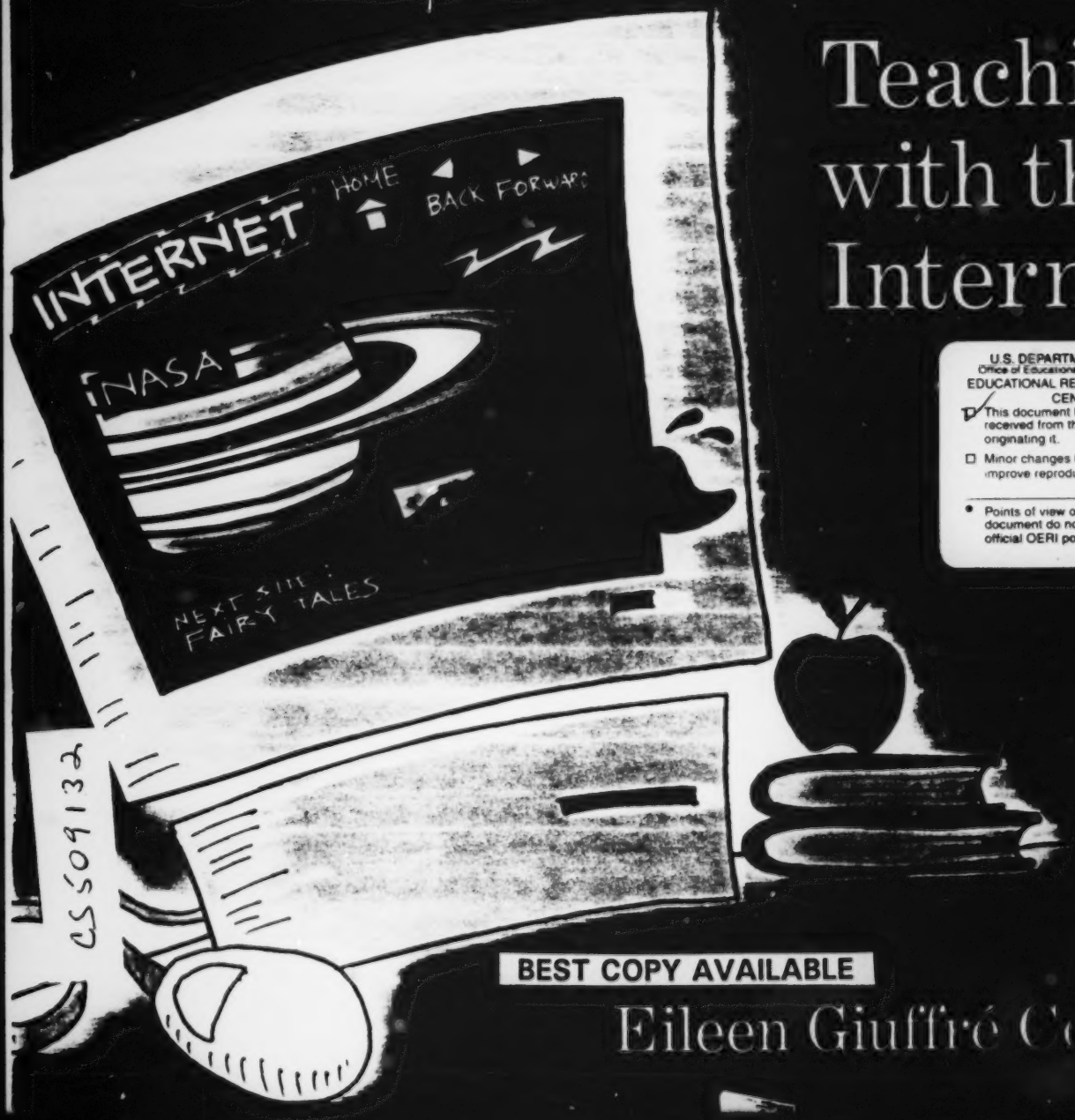
The Online Classroom

Teaching with the Internet



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Eileen Giuffré Cotton

The Online Classroom
Teaching with the Internet

by Eileen Giuffré Cotton

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ERIC (an acronym for Educational Resources Information Center) is a national network of 16 clearinghouses, each of which is responsible for building the ERIC database by identifying and abstracting various educational resources, including research reports, curriculum guides, conference papers, journal articles, and government reports. The Clearinghouse on Reading, English, and Communication (ERIC/REC) collects educational information specifically related to reading, English, journalism, speech, and theater at all levels. ERIC/REC also covers interdisciplinary areas, such as media studies, reading and writing technology, mass communication, language arts, critical thinking, literature, and many aspects of literacy.

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Dedication

To Chet

Who gave up a whole summer in our brand-new summer home on a mountainside in Wyoming so that I could write this book—for his patience, understanding, and great good sense of humor about it all.

Acknowledgments

The helpful people at ERIC/REC and the IU School of Education—Warren, Joyce, Ellie, Steve, and Kelly—made this book possible in record time by arranging a touch-and-go Internet connection via that precious 800-number, answering my many questions, and trouble-shooting my computer problems.

Thanks also to all the K-12 teachers who helped by giving me more great ideas than I knew what to do with on how to teach with the Internet.

About the Author

Eileen Giuffré Cotton is a world wide teacher. She has taught in public schools in California, at the University of Guam, and now as Professor of Education at California State University, Chico. She has traveled to every state in the USA, extensively in Canada, to the British Isles, the Orient, and Downunder. She summers in Wyoming with Chet (her husband for 24 years) on their mountainside, where she wrote *The Online Classroom*, as she tells you in the book. She collects teddy bears, drives a diesel pickup truck, likes steam engines, and is now shopping for her fifth computer.

Dr. Cotton's scholarly articles are in print throughout the professional literature, but you are more likely to encounter her making a presentation at a conference—she likes to work with teachers. When *The Online Classroom* is turned into an online course for delivery over the World Wide Web, K–12 teachers everywhere will be able to take part in a Cotton seminar on how to teach using the Internet.

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e: e-mail

f: FTP/Fetch

g: Gopher/Turbogopher

t: telnet

b: Browsers—Netscape, Mosaic

n: Netscape only

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CHAPTER 1

WHAT IS THIS THING CALLED THE INTERNET?

The Internet first interrupted my life when I saw an advertisement for 10 free hours of America OnLine (AOL). I sent away for the program, and as soon as I loaded it in my computer, set up my modem, and logged in, I was hooked. It was fun, but then I like to push buttons and play with gadgets and toys, so connecting up to AOL was a logical extension of a natural bent. I started to play with the different departments available, and I soon ran out of free time. There was so much to do and so little time to do it!

The next autumn, my university provided all faculty members with an e-mail account and access to the Internet via Mosaic, TurboGopher, Fetch, and Telnet. Being the pro who had already played with AOL, I figured I knew what all this good stuff was about, so I set out to explore some more. I tried lots of sites and decided that this Internet stuff was a lot of fun and held great promise for my students, but then I ran out of time again. Then came winter break, so I spent 3,000 minutes on the Net, exploring, learning, crashing into virtual walls, surviving the crashes, and becoming convinced that this was not only a place to learn and have a good time but also it was a way to tune-in and turn-on my students.

The learning I was doing was fascinating and interesting and NOW! Perseverance paid off, and soon I wanted more out of "the Net." I wanted to set up home pages, get my students connected, develop lists and links and lessons for future explorations and learning, play some games, and just surf. In a nutshell, all the surf-

ing and crashing that I did, led eventually to this book. The Net—I love it, and so will your students, and so—I hope—will you.

I am not a computer expert, guru, techie, nor any of the other not always polite names that people call the wonderful folks who can help you gain access to this amazing world of near-total knowledge at your fingertips. I know some of the buzz words, but I do not babble in techno-speak. I know how to do word processing and use database and draw programs on my MacMachine. About all you need to be successful on the Internet is the ability to use a keyboard and follow directions. I can do that, too.

There is one other thing you do need: TIME. It takes lots of time to find locations on the Net and then to develop lessons that will be useful and meaningful to your students. That's why I am writing this book. I want to make your introduction to the Internet easy by helping you save some of the time you might otherwise spend wandering around out there in virtual space. I also want to suggest ideas that you can use in your classroom when you integrate the Internet into your style of instruction. All the lessons in this book are lessons you can take right into your classroom and put into action at your next class meeting. All the sites and their addresses have been tested. I promise you: Give the Internet a chance, and your kids will learn from it gladly.

Sick 'em, Browser! or how to use this book

Browser is a noble beast who consistently wins First Prize in his "best of breed" shows. If you follow Browser through this book, he will sniff out Net resources for you, growl or bark the occasional warning, and wag his tail when you find something really neat. Browser's book is in two parts: "Get It? Got It!" and "Go with It? Cool!" These two minidialogues about Internet learning are my encouraging words to you, and yours to your students, and your enthusiastic replies and theirs, when you begin to see the Internet opening up before you. In each section I talk about programs and components of the Internet, following this with suggestions for lesson with the Internet, stating clearly the goals, rationales, objectives, procedures, and evaluation guidelines.

Because I am a teacher writing for other teachers, I do not start this book with the history and technical details of each navigation program (navprog) available; rather, I start out by telling you about the easiest things to do with the Net in your class, and then we go on from there. As you become more confident in what you and your students can do with the Net, the lessons become more challenging. Because I want you to feel comfortable using the Net, I want you to have lots of practice using

a navprog before you give it a try with your kids. Every so often, Browser will sit up and give you helpful hints.

As you gather confidence about using the Net, you will be able to teach with it better. Included in each chapter are teacher resources, lesson plans, and other suggestions that you can use immediately. To make the lessons even easier, all the Internet addresses or *links* you will need are written out for you. Some of the lessons can be completed in a single class period, while others are units of instruction that will take from two to five weeks (or more) to wrap up. You can use this book to integrate use of the Internet into your entire classroom curriculum, for once you have grasped the basics of how the Internet can serve you and your students as learners, you and they will be Net-surfing away to the exploration of your questions and interests and discovery of great stuff out there that you would never have imagined might be so readily available. Very likely, you will be on your way to the reinvention of your entire approach to teaching and learning, and—without doubt—your students will be on their way to the rest of their lives as travelers on the information superhighway.

The lessons are K–12 adaptable

You will notice that I have not stated exact grade levels for the lessons. I've been using computers and the Internet with elementary, middle-school, and high-school students, K to 12, so I designed each lesson with the thought in mind that you could easily adapt it to fit your specific classroom situation: You can make each lesson either easier or more difficult, depending on the grade level and ability of your students. When the kids are learning something new, they do not seem to mind material that might appear too simple; however, once they have learned an Internet process or have become familiar with a given technique, students are able to find their individual and appropriate levels of use and engagement.

To make the lessons most applicable to the greatest number of students, classes, and grades, I offer you both a typical table of contents and a matrix of contents (p. x). On the horizontal axis of the matrix are lessons or themes, and on the vertical axis are the approximate grade levels of the lessons. The intersections show the type of program or expertise that is required for the lesson to be successful. So, for example, if you look at chapter 12, "A Whale of a Time," you will find that it is appropriate for grades 4–8 and that you will need Netscape, Gopher, e-mail, and telnet for the lesson to be successful. "A Whale of a Time" is a relatively sophisticated lesson.

Collaborative learning on the Internet

All of the lessons encourage small-group work. Sitting in front of a computer all by oneself inevitably happens; you can get lost in your computer, hurt your husband's feelings, and let the kids go hungry; it can be lonely. So I have done what I

could to turn Internetting into a party. Collaboration with someone else is not only more interesting and more fun but also doubles your trouble-shooting and problem-solving power to figure out why the machine is not behaving as expected or where to search for some elusive topic of interest.

The Internet is basically about raw data and factoid information; at the same time, the Net itself encourages connections among ideas, so that when two or three students work together at a computer, the potential for connectivity increases proportionally. These pages, therefore, do not contain quiet-corner lessons for rainy days. These lessons will disrupt a classroom, stir up the noise of learning, and provoke the laughter and talk of bright ideas happening. This is good. Your job is to encourage the positive noise and discourage the negative static, meanwhile monitoring the process to make sure that your students stay on task. (The Net is a great seducer; it will lead you and your kids astray down unexplored paths and far-reaching avenues to hitherto unimagined information.) Finally, as peer collaboration is good for students, so also it is good for teachers: Use this book and explore teaching with the Internet in company with a fellow teacher and you will enjoy, and benefit from, both the book and the Net more.

Browser barks a disclaimer

I hope I've whetted your appetite for surfing on the Net and teaching so that the wealth of the Internet may enrich your class. Here's what you need: curiosity, a personal computer of some sort (either Macintosh or IBM-type PC), a high-speed modem, a telephone line, and appropriate software for a graphical connection. My computer is a point-and-click computer that I drive with a mouse, so I have written this book from the point of view of a person accustomed to graphical-type computers. I could not have written from the perspective of one familiar with specific keystrokes and what they accomplish. Sorry, but if you are unfamiliar with mouses, then you'll have to figure out the keystrokes on your own.

This warning goes double for the multitude of differing software packages out there on Macs, IBMs, other types of computers, and in Windows environments. At this stage of the evolution of computers and the Internet, so much diversity of both hardware and software clutters the countryside that it is impossible to write one book that describes all possible configurations, and it is equally impossible to write about all the possible screens with which you might be confronted. If my description does not quite match the reality on your screen, be patient and inventive and exploratory,

and be willing to try things and fail and try again. The Internet, as they say, is "dynamic," and that means it can be an unmanageable mess.

In view of this confusing situation, I decided to write a book about how to teach using the Internet—not a book about the Internet itself. General introductions and specific users' manuals are out there on the market, some to buy, some for free. If you need one, go get one, but I take for granted that you already know enough about computers to find your way around in your own machine and enough about the Internet to turn it on. From that point on, let's talk teacher talk!

Teachers and students up an on-ramp to the information superhighway

How to gain access to the Internet depends on where you live and the price you are willing to pay. Teachers and students in some cities and towns have access through a school district, county office of education, the state department of education, the local telephone company, or local businesses. Probably the ideal situation for a teacher is to have school-system-wide Internet access and a savvy technician at your elbow to answer all your questions and get the machine to work when you can't. I have that type of access in California through the server at my university and with the help of my techies. Failing that, a number of commercial Internet providers are in business to supply you—at first, for free; later, for pay—with the software needed to access their servers, and through them, the Net. Among the commercial Internet providers, some of the easiest and most readily available are America OnLine, CompuServe, Prodigy, GEnie, eWorld, and the new Microsoft Network. Follow Browser to the appendix for a comparison of these Internet providers.

In some states and regions, widely available Networks—sometimes called "freenets," when they are free; others relatively inexpensive—require only a local telephone call, and maybe a modest monthly fee, to grant access. On the down side, some areas in the U.S. do not yet have Internet availability of any kind, although most places will be on the Net before too long. I thought about attempting a list of all the access providers out there, but the Net is growing and the technology is changing so rapidly that my list would have been out of date before this book could be published.

The computer in my office at school is hardwired into the campus server—that way I do not need to use my telephone line and modem to get onto the Internet. I merely turn on my computer (a Macintosh), click on the program icon that I want, and I'm there in the blink of an eye. At home, I access that same server over the telephone lines using a 14.4 modem and a dial-up Internet access program called ARA (Apple Remote Access). When I'm on the Net at home, my phone line is busy. To

gain Internet access to write this book, I took my Mac and modem with me to a mountainside in Etna, Wyoming. Using PPP (Point to Point Procotol, a dial-up Internet access program) I dialed into the modem pool of Indiana University in Bloomington, one-third of a continent away, using an 800-number that the generous people at ERIC made available to me. Sitting on my mountainside in Wyoming, I was surfing out of an Indiana server onto the World Wide Web. I'm still new enough at this to think that this was pretty amazing! No matter where you are, with Internet access, you are at the center of the universe of information and communication.

For practical purposes, you don't really need to know about the type of server to which you have access or the type of connection required or most of the other technical specs and jargon. (That's what techies—bless them—are for!) What you do need to know is that the Internet is there and accessible, it's pretty user friendly (and getting friendlier all the time), and it's definitely loaded with lots of great stuff that you can use in your classroom to make lessons more exciting and real for your students.

Techie talk

Cyperspeak, the language of techies, is a whole new vocabulary of technical jargon, much of it made up of slang and pure neologism, that has emerged around the Internet. Now that you have the right gear and are eager to play with your new toys, it's probably a good idea to learn at least a few of the basic terms. It's highly likely that the kids in your class will already be conversant with this new and foreign language so follow Browser for your first vocabulary lesson in cyberspeak.

- **Internet**—*Information Superhighway—Cyberspace—the Net*: All are ways of say-ing the same thing—a public computer Network that links smaller Networks together so that users (you among them) can communicate. No one owns the Net and no one controls it, and it resides no more in one place than in another. It is a composite of information from various universities, schools, governments, businesses, online libraries, museums, databases, news services, lists, private individuals, and more, all linked together by a virtual network of electronic connectivity. To surf the Net, you need some navigation programs.

- **E-mail** *(electronic mail)*—a way to correspond with someone else on the Net who also has an e-mail connection. I regularly talk with people across campus and all over the world—friends, family, pro-

fessional colleagues, "postmasters" at remote Internet sites and "webmasters" at other Websites, people whom I have never met and shall never meet but with whom I enter into close and personal discourse over subjects of common interest to us. All without stamps or phone bills. I write e-mail postings, send them off, and forget about them. Soon—sometimes within a few seconds, sometimes the next day—answers to my e-letters pop up on my computer screen, and we go on from there. This book was written, edited, rewritten, and polished using e-mail as my editor in Bloomington and I in Etna to'd and fro'd electronically. I've never met the man, but we already feel like old friends, and certainly we have learned to work together productively in the ether. See chapter 2 for more about e-mail.

- **Browser**—is more than a friendly, computer-literate virtual canine who will help you with this book. A browser in cyberspeak is a generic name for navigation programs (navprogs) that use hypertext links (Don't worry: We'll talk about that down below) to other places on the Net. There are text browsers and graphics browsers. Lynx is a text browser. Netscape and Mosaic are graphics browsers. Text browsers let you see only written words. Graphics browsers let you see and hear words, pictures, and music. Graphics browsers are the way to surf the Net with fast, high-powered computers; otherwise, for older, slower machines, with less graphics ability, Lynx is better.

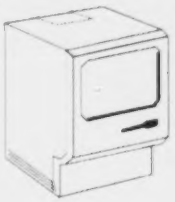
- **Netscape**—the state-of-the-art (in the summer of 1995) graphical browser. When you surf the Web with Netscape, the information you get will contain words, sounds, and pictures. If you have the right equipment, you can hear stories being read or whales singing, see photographs from the Hubble telescope or view microscopic organisms under electron microscopes, as well as read the Declaration of Independence through the spectacles of history. I prefer Netscape to all other browsers because it is easier to use, more powerful, and has more bells and whistles. When you use Netscape, you point and click to colored or underlined words (these are the hypertext links) and phrases to get to various places on the Net. Browsers are not linear programs like Gopher or ftp. See chapter 3 to find out more about browsers and Netscape.

- **Gopher**—either a pesty little animal that tunnels through the ground to get around or that tunnels through thousands of files in GopherSpace on the Net to get information. Gopher lives in GopherSpace (a linear, hierarchical community of files available on the Web). Gopher is a second generation navprog, so it is less evolved than a browser. The menus in GopherSpace are organized

such that you have to follow a path from more general to more specific, clicking/choosing/selecting your way down the hierarchy until you find what you are seeking. Gopher is a relatively friendly way to find and retrieve information on the Internet, especially text files without graphics. Because Macs and PCs are different, program names are different too. If you run a Macintosh, you use a TurboGopher; if you're an IBM-type, you use Gopher. To save time and energy, I refer to all GopherSpace programs simply and inaccurately as Gopher. Everything you need to know to teach with Gopher is in chapters 6 and 8.

- **ftp** *(file transfer protocol)*—another navprog that allows you to get files and other programs easily from a computer out there somewhere to your computer right here. Macs call ftp Fetch, PCs call it FTP. I use the generic ftp designation when referring to all of them. Most often, you will use ftp to download all the good stuff available, much of it—amazingly—for free, on the Internet: shareware, freeware, postcardware, files, documents, and files sent via e-mail. Freeware is free programs; shareware programs carry a minimal cost; postcardware programs ask you to send a postcard if you are using the program, so the writers can keep you informed of updates, changes, and bugs. Because ftp is a first generation navprog and, therefore, not nearly so user friendly as Gopher or Netscape, I postpone talking about it until chapters 7 and 8, after you will have built up lots of confidence and Net savvy.

- **Telnet**—yet another navprog and one of the more important ones. If you do not have direct access to the programs mentioned above, you probably do have access to them through telnet. Telnet is like the star gate through which you warp out into cyberspace to see what is available on the Internet. I do not know how telnet works, and we don't need to know. Telnet, ftp, and Gopher are not so user friendly as Netscape, and I predict that they will be replaced by navprogs that are even more easy to use than are current Web browsers. See chapter 9 to find out about telnet.



- **Netiquette**—shorthand for "network etiquette," you will want to teach your students that there are proper and improper ways of behaving on the Net, acceptable and unacceptable ways of saying things. For example, it's bad netiquette to write an e-mail message in all capital letters, unless you want your message to be read as if you had been yelling when you wrote it. Don't swear or use vulgar language on the Net—all kinds of lurkers may be reading your message, and it is only polite to use language that is inoffensive, unless, of

course, you intend to be offensive. Proofread your messages before you send them so that they truly convey what you want to say. Don't "flame": resist the urge to erupt with purple prose and give the offender a dressing down, even when someone on the list makes you angry or deserves the scolding. If you really want to nail someone, send a private e-mail message to that person's individual address, but don't post your tirade to the entire listserv or newsgroup.

The Internet is the most complicated, most far-flung experience of human communication thus far devised by human ingenuity; therefore, every imaginable kind of morality and immorality, ethics, mores, and values is represented on the free-for-all that is the Internet. You do not want inadvertently to offend anyone, and you do not want anyone to offend you. So, when writing something for public consumption, ask yourself the hometown newspaper question: "Would I mind if everyone in town read my message tomorrow morning on the front page of the newspaper? Would I resent having to read it myself?" If your answer is no, then go ahead and post the message. If your answer is yes, then don't.

Censorship?

The bad stuff: The Internet is a human invention, put together by computer sophisticates for their own various reasons. Some things on the Net are not appropriate for everyone. Some things are questionable, some things are inappropriate, and some things on the Net are just downright bad for children (and adults, too)! You can be sure that your eager students will find the good, the bad, and the ugly. Cyberporn, advocacy of violence, invitations to buy things that are prohibited to underage people, inappropriate invitations via e-mail to write to people who have perverted intentions for the naive and innocent—all of this and other bad stuff is mixed in together with the good stuff on the Net.

Depending on your news sources, these days, you may have been told that there are "tons of smut" on the Net, and that there is no way to protect yourself or your kids—whether your own children or your students—from objectionable matter on the Internet. On the newsgroups, on WWW, and on Gopher, you will find any number of sexually explicit sites. In classrooms where teachers use the Net all the time, they tell their students not to go to these sites, and then they regularly monitor their students' use of the computers. If your choice is to censor your underage people's use of the the Internet, you will be happy to know that the means of blocking unwanted traffic, both incoming and outgoing, though far from totally effective, are becoming increasingly so. America OnLine, for example, offers a "Protection Program," and new technology generically called "SmutBlockers" is becoming available.

IMHO (= "in my humble opinion"—a commonplace abbreviation in e-mail and on lists), there's good stuff and there's bad stuff out there, and it's up to you to pluck the roses and leave the thorns, and to teach your students to do likewise. Evil is lurking everywhere, on the Net and off; and on the Net, the good outweighs the evil. Cyberporn is mostly available through usenet newsgroups. At my university, usenet newsgroups have been blocked—my bosses do not want their employees wasting company time gossiping on newsgroups! In any event, we do not want to stop free access to information on the Net merely because a few sites are objectionable. It is part of our job as educators to teach young people how to cope with the unhappy realities of life. I believe that teachers and parents need to tell their kids what they ought and ought not to do, and then make the consequences of violating the rules fit the crime. That's discipline. That's education.

As a teacher, you can do a lot to help kids cope with the bad stuff in their world, including the bad stuff that assails them on the Net. One of your jobs is to encourage your students to stay on the right track, and another of your jobs is to be forthright with them when discussing the dangers that lurk, have always lurked, and shall forever lurk out there in reality. I've asked a lot of teachers and parents what they say to their kids. The following speech is more or less the essence of what most people say:

> *There's good and bad on the Net. I give you free access to the good, but I ask you to respect your fellow classmates and me and stay away from questionable and objectionable aspects of the Net. Please do not let me catch you surfing at restricted sites, for I will be forced to take action that will be unpleasant for us both. If you do not understand why pornography, violence, and other abuses are bad for you, stop by my desk after class and let's talk it over.*

When your lessons are well planned and tight, packed with information, and thought-provoking, you'll be able mostly to keep your kids out of trouble. On the Internet itself, find good help on "Keeping your kids out of X-rated areas" at this URL (Uniform Resource Locator):

http://www.cts.com/~netsales/herc/kidsout.htm

Then there's the problem of time. The Internet, like a spiderweb, is sometimes hard to leave because there is so much information out there and the dedicated Websurfer wants to see it all. Surfing the Web, cataloguing information, making connections, and THINKING are very addictive pastimes. I have not yet solved this problem for myself, so I have little advice to offer!

Welcome to the wide world of information on the World Wide Web!

The best thing about the Internet is the vast amount of information that is available, but to keep this information fresh and up-to-date, the Internet must change rapidly and daily. You can't possibly keep up with the Net; it's better just to plunge in each time you use it, expecting it never to be the same way twice. As Asian sages like to say, you can't wade across the same stream twice, and the Internet is the Mississippi River permanently at record flood stage.

I wrote this book in six weeks during the summer of 1995. At the end of that time, Tim McLain ("head writer" at *Classroom Connect*, published by Wentworth—**http://www.wentworth.com**) sent me the following list of new sites on the Web of special interest to K-12 teachers. This list, overwhelming in its richness for instruction, was Tim's sampling of Web links added to *Classroom Connect*'s home page in only three weeks during August, 1995. You can view the entire "new list" that Wentworth maintains at this URL:

http://www.wentworth.com/classroom/newedu.htm

Of course, the list will be different when you view it in December, 1995 or March, 1996 or thereafter. The Web is growing faster than anyone can keep up with.

Browser thinks that Tim's "new list" is great!

Beakman & Jax Science Stuff—**http://www.nbn.com/youcan/**
"A place to play and experiment for a while or surf on through," a must visit "for all students in grades 3–6 interested in science. and, well, grossing out their friends and parents!"

Science Guy—**http://www.seanet.com/Vendors/billnye/nyelabs.html**
Site of Bill Nye, Science Guy, one of the most popular science guys on television.

Crayola Crayons—**http://www.crayola.com/crayola/**
Shows how Crayola Crayons are made, a fun infomercial for kids about their old friends, crayons.

First Aid Online—**http://www.symnet.net/Users/afoster/safety/**
How to stock a first-aid kit, what to do in an emergency: "Do it now, *before* you need it."

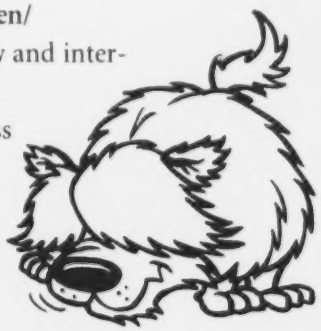
1996 Olympic Games—**http://www.atlanta.olympic.org/**
Guide to the 1996 Olympic Games, Atlanta, Georgia.

Puppets Page—**http://fox.nstn.ca/~puppets/activity.html**
All kinds of information about making puppets from scrap materials, idea sharing about puppets, downloading paper puppets, and patterns, puppet performance tips, and hotlinks to fun sites for kids.

The Weather Unit—**http://faldo.atmos.uiuc.edu/WEATHER/weather.html**
Features the Educational Rain Game, a complete thematic teaching unit, available completely on the Web.

Blue Dog Can Count—**http://kao.ini.cmu.edu:5550/bdf.html**
An arithmetic site for young kids: Type in simple formulas (e.g., 1+1), and Blue Dog will bark the answer back to you.

Virtual TeleGarden—**http://cwis.usc.edu/dept/garden/**
A telerobotic art installation that allows you to view and interact with a remote garden filled with living plants. Members can plant, water, and monitor the progress of seedlings via the tender movements of an industrial robot arm. Cool!



Librarian's Ready Reference Guide to the Internet—
http://k12.oit.umass.edu/rref.html
Teachers can use it, too!

The Bosnian Virtual Field Trip—
http://geog.gmu.edu/gess/jwc/bosnia/bosnia.html
An ongoing project to take you to Bosnia. You prepare for your virtual journey with a simulation of preparing for an actual journey: Get a passport, check the travel advisories, make travel and overnight arrangements, check out guide books, maps, and pictures.

Lesson Plans on the Internet—**gopher://ericir.syr.edu:70/11/Lesson** and **gopher://copernicus.bbn.com:70/11/testbed**
Two gopher sites at which you will find a total of more than 8,000 lesson plans ready to download and use in your classroom.

Wolf Studies Project—**http://informns.k12.mn.us/wolf.html**
A project used by teachers and students simultaneously to enhance their study of wolves while increasing further instructional use of the Internet.

Chemistry Pointers—**http://www.chem.ucla.edu/chempointers.html**

Mrs. Hull's Kindergarten Home Page—
http://www.hipark.austin.isd.tenet.edu/home/teachers/grade.k/hull
"Hi! My name is Sarah Hull and I teach kindergarten at Highland Park School. I have a very energetic group of children who love working and learning on the computers. We are new to all of this but look forward to working on the Internet and on the Web." Here you'll find dozens of poems and original artwork from Mrs. Hull's students.

International Student NewsWire—
http://www.umassd.edu/SpecialPrograms/ISN/KidNews.html
A news service for students and teachers around the world. Anyone may use stories from the service, and anyone may submit stories; comments and discussion of the news gathering, teaching, and computer-related issues is welcome.

Today at NASA— **http://www.hq.nasa.gov/office/pao/NewsRoom/today.html**
Outlet for NASA's daily updates on its missions into space.

The Visible Human Project—
http://www.nlm.nih.gov/extramural_research.dir/visible_human.html
A long-term project to make accessible complete, anatomically detailed, three-dimensional representations of the male and female human body. Currently, transverse CAT, MRI, and cryosection images of representative male and female cadavers at one millimeter intervals are being collected.

Fun Math—**http://www.uni.uiuc.edu/departments/math/glazer/fun_math.html** —puzzles, problems, and pictures that are mind-stimulating, educational, and entertaining.

Newspapers Online—**http://marketplace.com/e-papers.list.www/e-papers.links.html** —a single Webpage containing links to more than 200 newspapers worldwide with their own Websites.

Hotlist—**http://sln.fi.edu/tfi/hotlists/kid-sci.html** —a WWW resource list compiled by kids in grades K–8, mostly of science-related sites.

The Switched-On Classroom—**http://www.swcouncil.org/switch2.html** —an online, hyperlinked 250-page book outlining a 12-step technology planning and implementation process for public schools. The Guide contains instructive narratives, exemplary case studies of successful technology implementation, and an extensive listing of resources that will assist schools in their strategic planning efforts for technology.

Keep reading, fellow teacher, to find out what all of this means and how to use it! The estimate is that approximately ten percent of America's public schools are now online, and more are going online every day. With ninety percent still to go, the educator's use of the Internet is still in its babyhood. Wonder at this wealth, rejoice at the greatest help to teachers since Gutenberg invented his printing press, prepare to change the way you teach, and welcome to the wonderful world of the World Wide Web!

CHAPTER 2

E-PALS AND KEYPALS

Reach out and zot someone!

E-mail (electronic mail) is probably the easiest service to use on the Internet. When you're in e-connection with your e-buddies around the world, snailmail (a derogatory term for the postal system) becomes a thing of the past. No more phone tag, voice mail, missed calls, lost mail, insufficient postage, or expensive overnight FedExes. (Now we have downtime, off-line links, system bugs, and the constant threat of upgrades instead!) With e-mail you are in direct, immediate, and almost instantaneous contact with people all around the world. (Some e-mail transactions take overnight for delivery, depending on the technology involved; and even people who use e-mail still forget to read and answer their mail!) With e-mail, you can always find your correspondents, and they can always find you. In close contact, you can write messages to each other, read messages, file them, print them out for documentary evidence, and/or respond. And you can do all this without having to think on your feet in real time on the telephone—you can take your time as you ponder your replies, correct them, or even change your mind and delete them rather than sending them. Then, once your messages are sent, many e-mail systems will automatically file away a copy of your reply for future reference. It's that simple and that wonderful!

Once you get an Internet account, you have an e-mail address. To send and receive e-mail, you need an e-mail software program, but so many of these are on the market, and easy to install and use, that I will not bother to attempt to list their names, discuss their merits, or explain how they work. They're all pretty much alike, except that the specific command language differs from system to system. For example, "write a message" in some systems is called "compose," whereas in other systems

it is called something else; in some systems, "send a message" means to "file it," whereas "send it" is accomplished with a control-x command. And so on and so forth—you have to spend some time getting used to the quirks of whatever system you're stuck with.

Most systems have more-or-less the same heading at the top of each message: a "To:" line (e-address of the recipient), a "Subject:" line (space for a topic heading), a "Copy:" line (if you want to send a copy of the message to someone else simultaneously), and a "From:" line (your e-address to which your correspondent may reply); some systems are more complicated than this.

Another item of similarity for all the programs is your unique address, yours alone, much like a social security number. E-mail addresses, while they might look long and somewhat confusing, are relatively easy to decode: Think of an e-mail address as analogous to a snailmail address. In snailmail, you have a name, a street address, a city, a state, and a zip code. Likewise with e-mail, you have a name (usually made up of a first-name initial and a last name, though sometimes made up of numbers and random letters), the @ sign, the server ID (= the street address), a dot (.), location of the server (= city and state), a dot (.), and a domain (= zip code).

My e-mail address, for example, is **ecotton@oavax.csuchico.edu** —**ecotton** stands for *Eileen Cotton*; my server is at (**@**) a computer called **oavax** (**dot**), located in Chico, California, owned by California State University in that town (**csuchico**) (**dot**), where I teach, so it is an educational domain (**edu**). Quite often, the name section is the first initial and last name of the person at that address (as in my case), but this is not always the case. I have an e-friend who has a series of numbers in the name section of her address; while this makes her relatively anonymous, it is difficult to remember.

Domains other than education (.edu) will be reflected in the last part of e-mail messages that you will receive from all over the world: .k12 (school district), .com (commercial), .org (non-commercial organization), .mil (military), .net (network), and .gov (government). E-mail addresses outside of the U.S.A. have a country abbreviation, a two-letter suffix after the domain: .jp for Japan, .ca for Canada, .uk for the United Kingdom, .nl for the Netherlands, for example. Most e-mail addresses in the U.S.A. do not end in .us, but they could.

A fun exercise for your students is to collect domains or countries like some people collect stamps. See how many different countries are represented by the e-mail they receive, then mark these countries on a world map. It's a painless way to learn geography.

Notice that I have written all the e-mail addresses in this book in lower-case letters: ecotton, not ECotton. This is not required in this instance and certainly not by

every system, but it is required by some systems—these uncooperative systems are said to be "case sensitive." It's a good idea, therefore, to get into the habit of typing all your Internet addresses in small letters, rather than large, to avoid the headache of that nasty, machine-generated reply: "Undeliverable Message."

What purposes does being on e-mail serve? You can talk with someone else about something of interest to you and your correspondent. You can share news, voice opinions, compare and contrast facts and figures. It's a great way to encourage your students to read and write in an "authentic" (real-life) situation. It's electrifying to kids to realize that they are in e-contact with somebody in Russia or Africa or Asia. E-mail is fun, easy, informative, inherently educative, for as they say, "Travel is broadening," and e-mail is electronic travel. Now that we have e-mail, our telephone and mail habits will change, and these changes will last our lifetime. To get your students ready for e-mail is to get them ready for their immediate and future personal, academic, and business communications.

To communicate with someone else on e-mail, you need the other person's address. As yet, there are no e-mail directories or operators that can tell you an unknown e-mail address, although the compu-gurus are hard at work on both global yellow pages and global white pages e-directories. At present, the best way to find someone's e-mail address is to call them up and ask for it. Another way to find a specific address of someone you are seeking is to send an e-query to the "postmaster" or the "webmaster" at the site where you think the person's e-mail account resides. People almost always include their e-address as part of the information on their home pages. If you forget my e-mail address, but remember my name, then either send a query to postmaster@oavax.csuchico.edu and ask for Eileen Cotton's address or look me up on our CSU (Chico) home page. Most postmasters and Webmasters are very helpful; some are not.

At first, you and your students may have the problem of no one to send e-mail to. A quick and easy way to solve this problem is to subscribe to a list (or listserv, for long)—a special-interest group that talks about something you are interested in. Right after you e-mail your subscription to the listserv—probably that very day—you'll have more e-mail than you have time to read. After you have "lurked" on the sidelines for a while, learning the protocols of the list and the habits of the people who frequently post messages, you can take part by sending a message to the list. Your first message could be a simple one of self-introduction: "I'm new to this list. I'm interested in...." Someone will answer! You may be surprised at how many replies you will receive to your message. Here, however, is a point at which to teach your students reasonable cautiousness: Just as we tell kids not to take candy from strangers and not to get in cars with people they don't know, tell your kids not to give out their phone numbers, home addresses, or credit-card numbers over the Internet unless you or a parent knows.

How do you find lists that interest you and your students? How do you subscribe? These lists/listservs are sometimes called "mailing lists" or "bulletin boards" or "networks," and there are lots of them. You can subscribe to lists that deal with kids, learning, education, computers, libraries, art, music, endangered species, media, sports, any content area you teach, and any subject you want. There are, literally, thousands of lists.

To receive an up-to-date list of listservs on just about any topic, send an e-mail message to "listserv@cunyvm.cuny.edu" ("cuny.edu" stands for City University of New York). They will do a free global search about your topic and return to you a list of names and addresses of e-groups you might be interested in joining. In e-mail, here's how to do it:

To: **listserv@cunyvm.cuny.edu**

Subject: (leave blank)

Message: **List global**/category that you are interested in

This search will automatically generate for you a list of active mailing lists matching the key word or key phrase that you type in following the forward slash (/), where I have typed "category that you are interested in," and then that list will be returned to you via e-mail. When I, for example, sent the command **List global**/education, in a few minutes I received a message about 10 pages long listing all the mailing lists in education—a list 10 pages long for education alone! If you prefer not to receive so much information, narrow your keyword search. A narrower search would be "education-K-12" or "education-special" or "education-arts" or whatever else you are interested in.

Teachers and kids in the ether together

Because K-12 is what we do, K-12 discussion lists are a good starting point. If you don't want to look up your own lists, then you can subscribe to any of these K-12 listservs that Browser has sniffed out for you.

Kidsphere Network—an excellent list for teachers, with two components: one for teachers and one for kids.

To: **kidsphere-request@vms.cis.pitt.edu**

Subject: (leave blank)

Message: subscribe kidsphere *Your Name*

World Wide Web in Education—a large general mailing list that deals with setting up Web sites and home pages.

To: **listserv@k12.cnidr.org**

Subject: (leave blank)

Message: subscribe wwwedu *Your Name*

ECE Net—dedicated to early childhood education, ages 0-8.

To: **listserv@uiucvmd.bitnet**

Message: **subscribe ECE Net** *Your Name*

Middle-L—the list for teachers, administrators, and parents who seek solutions, projects, and resources for middle schools and the "kids in the middle."

To: **listserv@listserv.net**

Message: **subscribe Middle-L** *Your Name*

EduPage—a bi-weekly summary of recent news items on computer technology in the schools.

To: **listproc@educom.edu**

Message: **subscribe EDUPAGE** *Your Name*

INCLASS—a moderated list sponsored by Canada's School Net Project, about use of the Internet in the classroom from a Canadian perspective.

To: **listproc@schoolnet.carleton.ca**

Message: **subscribe INCLASS** *Your Name*

LIBER—for people affiliated with school libraries and media centers.

To: **listserv@uvmvm.bitnet**

Message: **subscribe LIBER** *Your Name*

In e-mailing your subscription to any of Browser's lists, when I say for you to write *Your Name* in the message field, I mean for you to type in your own name after you write the words that come before (and a space); this is the name to which the server will send the automatically generated reply. When I subscribed to Kidsphere, it looked like this:

To: **kidsphere-request@vms.cis.pitt.edu**

Subject:

Message: **subscribe kidsphere** *Eileen Cotton*

You will notice that I broke the rule: I spelled my name with a capital E and a capital C; I'm not e.e. cummings, after all! I wanted my name spelled right on all the messages that would be coming my way.

To subscribe to any online list, you use the same formula: **subscribe** <name of list> <Your Name>. **Do not type anything else!** You are going to send this message to a computer, so you can leave the subject line blank—no sense in confusing the poor machine with unnecessary information. Indeed, the absolute rule when communicating with a listserv, whether to subscribe or unsubscribe or ask for other services, is to use only the specific language which that system requires.

After you send the message, a response will arrive stating the rules, protocols, and FAQs (frequently asked questions) of that list, among them being this most important question: "How do I get off this list?" Save this information! I didn't do that for the first two lists I subscribed to. Later, when I needed help, I did not know how to get it, and when I wanted to get off the lists, I didn't know how. Sometimes you want to take a vacation or escape from a list for awhile, and this set of FAQs tells you what you need to know to control the list's access to your e-account. Deleting the instructions is a terrible mistake!

All lists have three addresses: (1) the discussion address, for ordinary purposes; (2) the automatic address, for requests that will generate automatic machine-generated administrative responses; and (3) the address of the list moderator/owner/SysOp (systems operator). If you want to discuss things on the list, use the discussion address. If you want to unsubscribe or get an archive of previous listings or find out who else is a member of the list or get a digest version of today's correspondence, use the administrative address. If you want to talk privately to the moderator, use the third address. Try not to get these addresses confused. It is usually easier to remember the discussion address than it is to remember the other two. This is one of the few times when pencil and paper can still be helpful.

Use the moderator's personal address, not the listserv address, when you want to complain about some list member's bad netiquette or when you are hopelessly confused and don't know what to do next. The moderators of some lists look at the incoming mail and screen it for pertinence; other lists are unmoderated. For school purposes, I prefer moderated lists. A savvy, fair-minded moderator can keep a list civilized.

Lists just for kids abound. Browser is on point to a number of lists to which kids may subscribe and where they will find many willing penpals—or, rather, keypals or e-pals. To subscribe to these lists, you and your students will send subscription messages that follow the guidelines stated above. Notice that the name of the list and the address to which you send your subscription are not always the same. In your subscribe command, use the name of the list, not the address

Kids Mailing List—an international list for kids who want to send and receive messages from other kids.

To: **joinkids@vms.cis.pitt.edu**

Message: **subscribe joinkids** *Your Name*

KidzMail List for Elementary Children—for young kids to explore issues and interests with e-pals and keypals.

To: **listserv@asuacad.bitnet**

Message: **subscribe kidzmail** *Your Name*

Kidcafe—10-to-15-year-olds who want to chat.

To: **listserv@ndsuvmi.bitnet**

Message: **subscribe kidcafe** *Your Name*

Youth Net—is another chat list for young people.

To: **listserv@indycms.bitnet**

Message: **subscribe Youth Net** *Your Name*

Penpal-L—a list that does what its name says it does.

To: **listserv@unccvm.bitnet**

Message: **subscribe Penpal-L** *Your Name*

International E-mail Classroom Connections—a list for teachers who are seeking classes to partner with their classes for international and cross-cultural e-mail exchange.

To: **iecc-request@stolaf.edu**

Message: **subscribe IECC** *Your Name*

Other than setting up keypals and e-pals, what else can you do with e-mail? Lots! And a kid of any age who can hunt and peck out words on a keyboard can take part. Even little kids who can't write or type can dictate messages to big kids who can. The idea of having e-mail waiting is very enticing, and most kids get excited at the discovery that there are people out there who want to speak with them. The ease with which one generates, corrects, and deletes text on an electronic keyboard; the relative interpersonal immediacy of e-mail; and all the many other fascinating aspects of this new toy, the computer on the Internet, make it the greatest incentive ever to early literacy. For little hands struggling to gain small-muscle control, it used to be hard to learn to write; now it's easy—and they're never too young to start.

I was in communication with a first-grade class during spring semester '95, and the youngsters clearly understood what they were doing. Never think that your students are either too young or too sophisticated to participate, and don't be surprised or offended when your young students take more readily to computers and the Inter Net than you do. It's called the Generation Gap, and this time, you and I are on the wrong side! Turn them loose, let them go, and learn from them all you can!

Browser thinks it's time to use this new-found knowledge in your classroom, so here goes!

IN YOUR CLASSROOM:

Keypals on the Internet

Goal

To broaden the horizons of your students while encouraging reading and writing skills, higher-level thinking skills, and civilized discourse with other members of the human community.

Rationale

It's always nice to have someone else to talk to, to bounce ideas off of, and have a gossip fest with. It's also good to have friends all over the world in case you ever go on a long trip.

Objective

Students write and respond once a week to a keypal not in their hometown. Purpose of the e-correspondence is to discuss, compare, contrast, and analyze topics that are being studied in class (from weather-watching to bird-watching, work and hobbies, culture and dating habits, moms and dads, food and algebra, world events and local disasters, just anything).

Procedure

Before starting this assignment, you need to have corresponded with a list (some lists) on which you have arranged for some keypals for your students. Set the stage with your students by sharing some e-mail from a list on which someone from far away talks about a topic of interest to your class or, maybe, asks you a question about your students.

Let your students either choose from the keypals you have found or explore addresses from the list (in Browser's box). Make sure that everyone knows how to subscribe to a list. Make sure that everyone finds an e-pal, and that everyone gets a communication line started. As the semester progresses, prompt your students to engage their keypals in discussion of various aspects of topics and subjects being studied in your class.

Evaluation

By the end of the semester, your students will have gained a better understanding of, and broader perspectives on, the topics and subjects covered in your class because they will have absorbed the perspectives of their e-pals and keypals. They will have experienced reading the authentic (real) writing of other people. They will have written their own ideas in cogent and meaningful ways that were efforts at being understood by respected peers, rather than mere school exercises. They may have developed friendships that span miles and oceans and may stand the test of time.

Once your students have keypals, you and they can study geography by pinpointing the locations of e-mail correspondents. Suggest that your class make a "country collection" (and a "domain collection," too) by looking at the suffixes at the end of each e-mail address. You can study language arts by looking at speech patterns, letter composition, spelling, and effective ways to convey an idea to other people. Your students are accustomed to having you correct their writing in terms of its content, cogency, organization, grammar, syntax, and spelling. Ask them, now, to pass judgment on the writing of their e-buddies—not that your students will necessarily remark to their e-pals and keypals on their English usage. If your class partners with a class of kids overseas learning to speak English, however, your students can have great fun—and learn more language skills than ever before—by being ESL teachers and teaching the other kids better American English. Your kids, in turn, might start learning another language.

You and your class can engage in cross-cultural communication, explore others' points of view, learn about distant countries, and expand your minds and hearts to awareness of other people's holidays, celebrations, clothing styles, food, hobbies, hopes, and loves. Your kids will be fascinated to find out the similarities and differ-

ences of other kids' lives, their parents and siblings, who lives in the household, and what other kids do for spending-money.

I was scanning some keypal messages from Germany in which the students were talking about living in "terraced houses." A good question for a keypal to ask is what the difference is between terraced houses and ordinary houses. Try communicating with a class in the eastern hemisphere, and find out about time zones. Try communicating with a class in the southern hemisphere and discover differences in the seasons, weather patterns, and the Coriolis effect. For older students, lists in many specialized areas are not necessarily dedicated to students, but many adults are quite willing to correspond with thoughtful kids.

Among the hundreds of appealing lists, Browser selected these few because you can use them immediately in your class. Your students can subscribe to any of these lists by sending an e-mail to the address as it is printed.

Language/Literature Lists

AATFREN—American Association of Teachers of French

e-mail to: **AAFTREN@listserv. Net**

CAUSERIE—French Chat discussion list for fun conversations in French—very good for your French class and for your own French.

e-mail to: **CAUSERIE@uquebec.ca**

TESL-L—Teachers of English as a Second Language—to arrange e-mail relationships with ESL students overseas.

e-mail to: **TESL-L@listserv. Net**

LITERARY—for the lover of literature.

e-mail to: **LITERARY@listserv. Net**

Math Lists

MathMagic K-3—problem-solving skills, grades K-3 discussion list.

e-mail to: **majordomo@forum.swarthmore.edu**

MathMagic 4-6—problem-solving skills, grades 4-6 discussion list.

e-mail to: **majordomo@forum.swarthmore.edu**

MathMagic 7-9—problem-solving skills, grades 7-9 discussion list.

e-mail to: **majordomo@forum.swarthmore.edu**

MathMagic 10-12—problem-solving skills, grades 10-12 discussion list.

e-mail to: **majordomo@forum.swarthmore.edu**

MathMagic-General—general math discussion list.

e-mail to: **majordomo@forum.swarthmore.edu**

Social Studies Lists

- *African Forum*—discussion list of issues and topics of interest to Africans, both in Africa and in the diaspora.

  e-mail to: **africa-l@vm1.lcc.ufmg.br**

  e-mail to: **listserv@vm1.lcc.ufmg.br**

[N.B.: Here's a good spot to make a point about careful reading: Make sure that you distinguish between "1" and "l" in the two addresses, above. Computers are unforgiving, when it comes to typos and wrong characters.]

Argentina and South America—discussion list good for students studying Spanish.

e-mail to: **argentina@ois.db.toronto.edu**

e-mail to: **argentina-request@ois.db.toronto.edu**

Central America—discussion list, mainly for Costa Rica and Panama; also good for students learning Spanish.

e-mail to: **centam-1@ubvm.cc.buffalo.edu**

e-mail to: **listserv@ubvm.cc.buffalo.edu**

European Community—discussion lists, good for talking to ESL students and for working on European languages and cultures.

e-mail to: **ec@vm.cc.metu.edu.tr**

e-mail to: **listserv@vm.cc.metu.edu.tr**

e-mail to: **ec@indycms.bit Net**

e-mail to: **listserv@indycms.bitnet**

Native American—discussion lists:

e-mail to: **natchat@tamvm1.tamu.edu**

e-mail to: **listserv@tamvm1.tamu.edu**

e-mail to: **native-1@tamvm1.tamu.edu**

e-mail to: **listserve@tamvm1.tamu.edu**

The number and styles of lessons you can do involving e-mail are limited only by your own and your students' imaginations. Use e-mail and list participation at all grade levels. Let your lesson-planning creative juices flow, and you and your students will discover that your own classroom is the center of the universe.

CHAPTER 3

NETSCAPING

If you read a book about the Internet published as recently as 1993 or 1994, you will see the wonders of Gopher and telnet lauded, and you will be told how to access GopherSpace and ftp archives, and if you keep reading, you will probably become thoroughly confused. These programs are still used a lot, and I gladly tell you about them in chapters 6, 7, 8, and 9, but they are not so user friendly as a generic World Wide Web browser. Thank goodness, times have changed! Thank goodness for Netscape!

In this chapter, we plunge into the WWW using one of the easiest navigation programs around: Netscape. The world of the Internet and ways to navigate it are changing even as we speak. To be a successful surfer on the WWW you need to be flexible. If you're not flexible, you'll break, and who wants to get broken over a spiderweb of information!

There are many Web browsers out there. You see such titles as Cello, Mosaic, Lynx, Netscape, Quarterdeck, and others. They all fall into two main categories: text-based and graphics-based browsers. A text-based browser allows you to see words without pictures and sound, whereas a graphical browser lets you see and hear the whole tamale.

The first browser I used was Mosaic. Mosaic was marvelous, if a little slow, but I was unaware of the existence of any other browsers. Then I read on a listserv to which I subscribe that I could download for free a wonder-program called Netscape. So I downloaded Netscape as an ftp file and gave it a spin. I have not used Mosaic since. That's how fast things change, if you're willing to roll with the punches! Netscape will eventually become obsolete, too, but for now, it is the best browser

we've got going. I use only Netscape to browse the WWW; only as a last resort do I call up Gopher and FTP navigation programs, and never Mosaic, anymore.

Fairly detailed discussion of Netscape

Netscape just went public, and that means you can buy it. You can also get earlier, working versions of Netscape from a variety of free sources. Best and easiest, you can download it as an anonymous ftp at **ftp.netscape.com/** and you can get it from the University of Minnesota via Gopher at **gopher.forestry.umn.edu**. (Not to worry! In a few more chapters, all will be revealed, and you'll know how to gopher and ftp.) At either site, take care to get the correct Netscape version for your computer (Macintosh or Windows or UNIX). It's free, I repeat, and easy to download. If you're still too intimidated to try downloading it yourself, I bet you can also get Netscape from your friendly local techie.

To be able to talk about either Netscape or Mosaic or any other WWW browser, you need to know a few bits of technical jargon first. As in the military, there are acronyms that are a nuisance if you don't know them, and helpful shorthand if you do. Browser has barked you up a few bits of gobbledegook.

Techie talk

- **WWW**—World Wide Web, "the Web,"or W3, the Internet organized and approached a certain way, the collection of "stuff" out there that can be found on the information superhighway by way of a browser.
- **URL** (pronounced "earl" by some, and u-r-l by others)—Uniform Resource Locator, the generic term for addresses on the WWW or the Internet. All browser addresses start with http://.
- **http**—stands for HyperText Transfer Protocol, and it is always written with lower case letters followed by a ://

  As an aspect of software design, HyperText is a medium that lets you bounce around the WWW in non-linear fashion to find information: You can go from point A to point H, and from point H to point Q, and then from point Q back to point A, and so on. In Gopher and ftp, you move linearly, hierarchically, from point A to point B to point C, and stepwise back again; that means that you have to think about what you're doing more in Gopher and ftp than you do in the WWW, where you can just ask for what you want and receive it

without having to worry about how to get there. All documents on the WWW accessible by browsers are written in this mode; therefore, all WWW addresses begin with http://.

- **Home page**—a Webpage at a Website—a location or page on the WWW that contains information or *links* (see below) that take you to other sites and further information. Home pages are like store-front shop windows where the goods inside are displayed to the passersby, or the table of contents to a book; the home page tells you what is available at that Website. With your mouse, click on the links and move forward or backward or sideways through the Net. Home pages are written in a language called *HTML* (see below). Well-designed home pages give you attractive graphics and easy-to-read information about their sites, and they supply you with hotlinks to yet other sites in Gopher, FTP, newsgroups, e-mail addresses, as well as documents, and anything else that the authors of those home pages consider relevant to their home pages.

- **Links**—HyperText links, or just "links," for short (a.k.a. "hotlinks")—the colored or underlined words or images or graphics to which you point with your mouse, click on, and then bounce to somewhere else on the Web. From link to link, you can wander and navigate your way from one Website to another, and back again, while Netscape keeps an automatic record of your travels for you, so that you don't get lost. Distinguish hotlink from "hot site" or "hot topic," i.e. Websites that are popular or controversial and that attract heavy Net traffic—some hot sites get in excess of 10,000 "hits" (logins or accesses) per day. "Cool links" are links that are considered especially novel or neat. "Slow links" take a long time to load.

- **HTML**—HyperText Markup Language, the language or code in which documents and home pages on the Web are written. (See chapter 18 for a lesson on how to code in HTML so that you can develop your own individual home page and a home page for your class.)

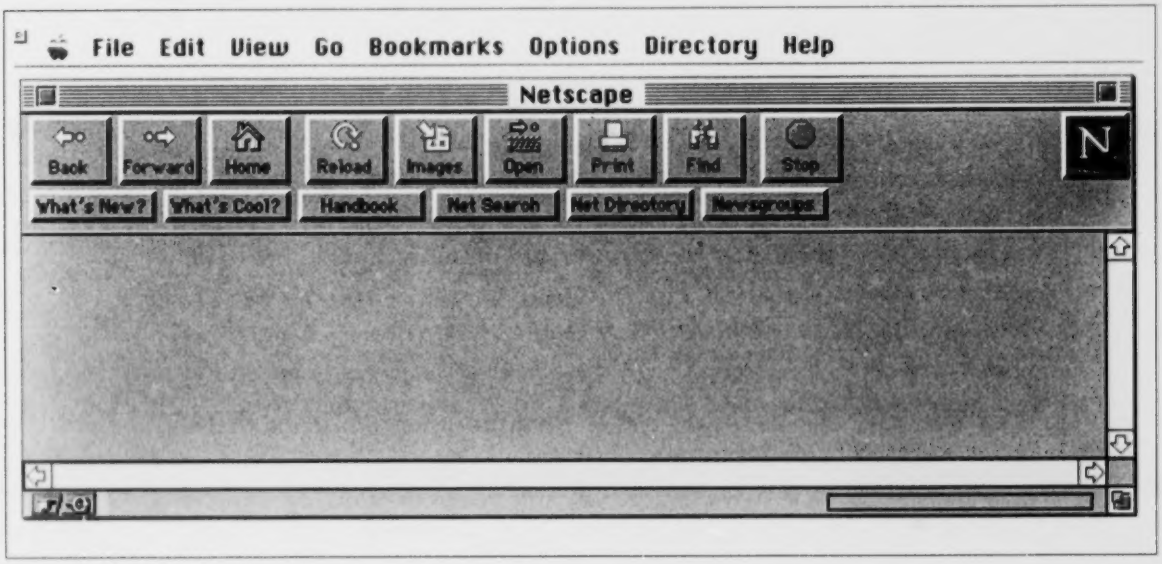
- **Search engines**—ways to search through the WWW to find what you want. Among the handful of ways to search the WWW, I use Lycos, WebCrawler, InfoSeek, and Yahoo the most. These engines have directories that are narrow, covering only 500-600 megs of info. If you want a broader search, go to WAIS.

- **WAIS**—Wide Area Information Search (pronounced "ways")—a search engine that you can drive all over the Internet, rather than to a specific location, and stand a good chance of finding anything that's out there that you want. WAIS, however, can bog you down with too much information—there are now some five million Webpages worldwide, and more coming all the time.

Down, Browser! That's enough vocabulary, for now. (Once you get Netscape installed, you can find out more about Netscape itself at this URL: **http://home.mcom.com/**)

Let's go Netscaping!

Look at the picture of a Netscape screen below, and let's play with the buttons to find out what they do. If your computer and your version of Netscape are different from mine—and they probably are—the details of how yours looks and how mine looks will be different. It's not possible to describe this beast in general because each version of it is specific, so be patient, be flexible, and translate what I am saying into the bells and whistles on your own screen there before your face. Netscape relies on these buttons and pull-down menus as the easy-to-operate controls of the program. You need not memorize them—it all comes with practice.



Bells, whistles, and buttons

The BACK button takes you back. If your BACK button is faint, then it is not yet activated—because you have not yet gone anywhere, there's no "back" for BACK to take you to. As you surf along, BACK will become dark; now you can click on BACK to go back to wherever you were before, one step at a time, until you finally come to where you started.

BEST COPY AVAILABLE

Click on FORWARD, and it takes you—guess where?—forward along the path you have been traveling. This way you can move back and forth, revisiting sites without losing your way or having to key in long URL strings.

Click on HOME, and it will take you all the way back to the opening page where you started. The default home page for Netscape is "Netscape," but you can change that, if you like, by going into Options. (More about that below.)

Click on RELOAD when you are working with real-time graphics and when Netscape bogs down and seems to need refreshing.

Click IMAGES off, if you have a slower computer (like mine). Images take a long time to load. You can always click an individual image on, if you want to see it. I click IMAGES off and on all the time to save time. If you have a high-speed computer, you'll probably ignore this feature.

Click on OPEN to find a home page. A dialogue box will appear, and you will type the URL you want into the field, key RETURN or OK, and Netscape will take you there.

Click on PRINT to print the page. Click on FIND to locate something quickly in the document you are reading.

STOP—one of the greatest buttons around. Sometimes Netscape just doesn't feel well that day, and it grinds and grinds, and shall grind forever, trying to load a document. Click on STOP and give it a rest! Then, when you start over, the thing may work like a charm. (And they call this scientific!) STOP is a great timesaver, one that I use a lot. (Mosaic does not have a STOP button, so sometimes you just have to sit there, waiting, tearing your hair, wondering if maybe Mosaic has gone out of business, if your computer is fried, or if the address you are seeking has gone off the air. Computer's have been bad for my soul: I'm even worse at waiting than I used to be.)

The LOCATION box is either the field into which you key the URL of your next destination or displays the URL you are at right now.

The DIRECTORY BUTTONS are for surfing fun. If you have a small screen, you may want to turn off the DIRECTORY BUTTONS, for they are also available from the pull-down menus. I turn mine off because they take up too much room on my baby MacScreen. (I can hear the PC-types chuckling smugly. My Mac is a lovely little SE/30 that is 5 years old, has traveled all around the United States with me, and we are good friends—can you say that about your PC?)

Click on WELCOME to learn more than you want to know about Netscape.

Click on WHAT'S NEW to see some of the hundreds of new home page appearing each week.

Click on WHAT'S COOL to see a list of really great sites for that week.

HANDBOOK (called QUESTIONS in some versions of Netscape) gives you directions and help for and about Netscape. This one's a biggie. Since I'm not covering every aspect of Netscape, click on the HANDBOOK to find out all the details that I am leaving out.

The next two buttons take you to the engine room—search engine, that is. Click on Net SEARCH to fire up the search engines mentioned in the glossary above. Net SEARCH allows you to search for specific information or a particular home page, either by searching for home page titles, subject fields, document content, or other indices and directories.

NET DIRECTORY, according to what I found by clicking on HANDBOOK, is "a master directory of Internet sites and other Internet directories."

NEWSGROUP takes you to the various newsgroups out there on the Web. Some versions of Netscape do not have a NEWSGROUP button, although you can get to newsgroups another way via Netscape by clicking on DIRECTORY, in which pull-down menu you will find "Go to Newsgroups." Dedicated newsreader programs such as Trumpet, TIN, and some others, also exist.

An aside about newsgroups

Newsgroups on the Web are a good idea. They are like e-mail lists in that you can ask questions, post opinions, engage in dialogue, but they are more substantial than most lists in that many of them are professionally managed. Some of them even have **news** on them! I'm a news junkie, so from my mountainside perspective during the summer that I wrote this book in lovely Etna, Wyoming (pop. 200), access to my favorite newsgroup, *NewsWatcher*, was just the fix I needed to feed my habit. News read on a newsgroup is NOW, like having your own news service or an old-fashioned teletype machine, like in the movies. Newsgroups are available on every subject thinkable—click on NEWSGROUP and surf to your heart's delight, looking for whatever interests you! You can get intelligent answers to specific content questions faster and better on the right newsgroup than just about any other way.

On the other hand, newsgroups are the occasion of much of the moral consternation over the Web, these days. To some people, newsgroups are a temptation to waste ferocious amounts of time. Newsgroups are also the main place where pornography and other undesirables pop up publicly on the Web. (Sexual communications on e-mail are more private, although—never forget!—nothing you send out over the Internet is ever truly private or perfectly secure.) When I searched for newsgroups with the word "sex" in the title, the IU system generated a list as long as your leg. The postings on some of them were scholarly and informative, like other newsgroups, a

means of communication concerning a topic of great interest. Some of them, to my taste, were perfectly awful.

For these reasons, some servers block access to some or all newsgroups. The server at my university blocks access to some newsgroups, and this surely constitutes some form of censorship—but that's a different question. Look up "Newsgroups" at the WELCOME button or in the HANDBOOK/QUESTIONS, and read more about them. What you do with newsgroups is up to you. Even without access to newsgroups, I find more on the WWW than I have time to deal with.

Pull-down menus (mainly a repeat of the buttons, but not exactly)

Pull down GO, and you are greeted with a list that tells you where you have been during your current Netscape session. Pull down GO and click on the title of any document, home page, or link to which you would like to return directly (as opposed to going BACK one step at a time). GO also lets you view your surfing history, showing the URLs of every site that you have visited during the current session.

Pull down SOURCE to see a home page written in HTML. See chapter 18 for more about that.

Pull down BOOKMARK, click on "Add Bookmark," and voilà, whatever URL is current on your screen will be added permanently to your bookmark collection—yours forever, until you delete it. (URLs in GO are not saved forever: When you turn Netscape off, anything in GO will be gone.) BOOKMARK is as nifty a time-saver as STOP. As you explore the Web, you will find sites to which you will want to return again and again. BOOKMARK allows you to save your favorite URLs for quick and easy access. My bookmark collection was four screens long until I read in HANDBOOK how to organize them into categories—so I did. Now it's only two screens long, with lots of categories and so much easier to use.

Pull down OPTIONS to set up Netscape to suit yourself. You can turn off "Auto Load Images," if your computer is slow, by clicking away the check mark. You can turn off "Directory Buttons," if your screen is small, with the same sort of move. By clicking on "Preferences," as with word-processing packages, you can set your default values. Customize the type font and size of the text, as well as the colors, on your screen. I prefer larger-than-usual print, so I have the font size set for 14. The large print allows me to read the screen easily so that when my students are working away, I can take quick glances at what they are doing without squinting or putting on my glasses. If you do not want to see the Netscape home page every time you turn Netscape on, change "Home" by typing in the URL of the home page you do want to see.

After you have made changes under "Preferences," use the last selection in Options and "Save" your changes; otherwise, the computer will not remember the changes that you want made.

You can skip VISIT—it changes every day and is little more than an advertisement for the company or commercial product of the day. (Some systems do not have a VISIT button or menu.)

Opening your first home page

"Half the fun of going is the getting there," say the tourist agencies. Now that you know how to have fun getting there, where is it, exactly, that you're going? The destination of your Websurfing with Netscape is all those home pages out there that are the front doors to the libraries of knowledge behind them.

Let's surf over now to a famous home page to find out what home pages are like—the most famous address in America, 1600 Pennsylvania Avenue, Washington, D.C., the White House. In Netscape, however, the address is an URL. Click on OPEN, and when the dialogue box appears, type in this URL: **http://www.whitehouse.gov/** In a few seconds you will see a picture of the White House—you're in! (No security checks, no waiting in line; this is access!) Around the picture are some graphics that are also hotlinks to other pages. Point your mouse to "Executive Branch" and click on it. See where you go? Now click on BACK to return to the home page with the picture of the White House on it. Click on another of the hotlinks, and away you go—FORWARD and BACK, click and surf. You've got the idea! Cool!

Scroll down that page and you will see words and images written in a different color (if your monitor lets you see the colors of Oz) or underlined words (if, like me, you're still in Kansas). Click on these colored/underlined hotlinks and you will automatically be transported (like Dorothy) to a connected Website. The first time I did this, I was already thinking: "What a great lesson for my class this home page thing is gonna make!"

By pointing and clicking in Netscape, you have already become a Netsurfer. You can point-and-click and hotlink your way to thousands of home pages already on the Net, with about 1,200 new ones being added each week.

Try another home page by clicking on OPEN, typing in this URL: **http://www.packet.net/schoolhouse/** and thereby surf to *Latitude 28*. Scroll down a little and click on *Step into the classroom*. On this page, read what four other teachers are doing with the Internet in their classrooms. Now the ideas will be flooding your mind for your own teaching with the Internet! Browser wants you

to surf to the *Canine Connection*. (I wonder why?!) Go ahead, humor him: Click on OPEN, type in **http://www.webcom.com/~tns/tcc/welcome.html** and find out whether Browser is one of the recognized breeds of the American Kennel Club. I prefer the *Godiva Chocolates* home page, myself—**http://www.godiva.com/**

You've just typed three rather long URLs, and you may be wondering why they have to be so long and complicated. With 1,200 new ones each week, and every URL needing to be unique, they have to be long so that they can be different. Once you know how to decode the letters and numbers of URLs, however, they become a little easier to cope with and remember. The logic behind the letters of URLs is similar to the logic behind an e-mail address. Let's decode the URL for the White House: **http://www.whitehouse.gov/**

http:// means it's a HyperText document.

www means it appears on the World Wide Web.

whitehouse is the name of server or computer where the account that we are seeking is resident.

gov/ means that the domain of the server is the government.

What to do when it doesn't work

Sometimes when you are Netscaping and you attempt to access a site, you will be met by one of a dismaying array of negative responses. Chief among these are "403 Forbidden," "404 Not Found," and "Unable to connect to host."

In the "forbidden" case, a subscription (for pay or with membership) and a password are required for access, which you do not have, and may or may not be able to get. "Not found" may indicate that the targeted Website is now empty, has changed its name and address, or has just disappeared. "Unable to connect" means about the same thing—the site may have been removed from the Web or else the Website is busy.

The WWW is a living, growing, rapidly changing thing; there's no guarantee that an http site that you found yesterday will still be there tomorrow—and, likewise, no guarantee that the http sites that I recommend in this book will necessarily still be there when you try to find them.

Sometimes you may have trouble getting an http address to work. You may get another of those messages, "Code Not Found." If so, truncate the address—don't type in the whole thing, backing up a segment at a time from the right-hand end—and try it again. Sometimes nothing seems to work, your machine seems to be getting clogged up, everything's slow, and Netscape cranks and cranks away, but nothing shows up. That's when it's time to pull the plug. As with human beings, these hi-tech scientific

machines, alleged to be devoid of personality, need a complete rest from time to time. Log it out, turn it off, give it a rest, and then fire it up again; it'll probably work, then.

Surf's Up!

Now that you know how to ring the bells and blow the whistles, it's time to play a tune. Surf with abandon—play with the buttons and pull-down menus to find out what they do! See what you can find! Let the kid in you come out—go ahead, you can't break the machine or screw up the program! You'll be surprised at how easy it is to use this comprehensive, Web-embracing program. Click on the WHAT'S NEW and WHAT'S COOL, then try Net SEARCH and range widely. See for yourself what you think of NEWSGROUPS. Check out each of the search engines.

Scan down until you see "Info Seek Search," "Lycos Home Page," and "WebCrawler Searching." These are three search engines that will help you find home pages and information on the topic of your interest. Pick one of them and search out any topic of your choice. If you can't settle on just one word to start with, try "whales." Using Lycos, I got 91 hits, but this will probably increase as more home pages are added. In this HyperText medium, you can move with perfect ease from one site to the next and back again, saving what your like for future reference as a Bookmark.

The beauty of most browsers is their similarity. Most have very nearly identical functions, although the terminology for their buttons and options may differ. This year, Netscape is the cool browser; next year—or next week—who knows what'll be cool! In terms of how browsers are at the moment, if you've worked with one browser, you'll be able to use them all.

Don't read this part, yet!

At the beginning of this chapter, I imply that browsers, like Netscape, are the coming thing on the WWW, and I say that Gopher, ftp, and telnet will soon be things of the past. In fact, it's nearly already that way. Unless you know about Gopher and ftp, and telnet, the next couple of paragraphs will be meaningless to you, so skip right over them, if you like, until after you've read chapters 6, 7, 8, and 9; then come back and read this page.

Here's why Netscape is better than all the rest. If you want to access a file in GopherSpace, you do not need to change navigation programs: Stay in Netscape, click on OPEN, and at the URL prompt, type **gopher://** in lowercase letters, followed by the address you want in gopher. If the address begins with **gopher**, then type **gopher://gopher...** and the rest of the address. When you hit RETURN, a familiar-looking set of gopher files will appear, and you can surf away in GopherSpace using Netscape.

The same is true for ftp. At the URL prompt, type **ftp://** and the address you want from FTP or Fetch. The same prompts for ftp will appear, and you take it from there. This is so much easier than having to work with three or four different navigation programs. The beauty of a browser is the ease with which you can go anywhere on the WWW.

In Netscape, give this a try: Click on OPEN and type **gopher://ericir.syr.edu** That will get you to ERIC—the Educational Resources Information Center—and a gopher menu that looks like this:

Gopher Menu

News and Information about ERIC and AskERIC

Map of the Library

Search AskERIC Menu Items

AskERIC Toolbox

Frequently Asked Questions (FAQ's)

AskERIC InfoGuides

Lesson Plans

Education Listservs Archives

ERIC Clearinghouses/Components

ERIC Digests File

ERIC Bibliographic Database (RIE and CIJE)

Bibliographies

News & Announcements of Interest to Educators

Other Education Resources

Education Conferences

Electronic Journals, Books, and Reference Tools

Internet Guides and Directories

Gophers and Library Catalogs

If you click on any of the file folders, you will be transported to that item. I recommend that you try "Lesson Plans" and see what ERIC has to offer. You'll be pleasantly surprised!

In your classroom

In this chapter, I offer you no other "lesson plan" than this: After you have surfed on Netscape for awhile, I suggest that you take your new knowledge with you to your classroom and share with your kids what you have discovered thus far—and your excitement, amazement, and expanding horizons. Set yourself and your kids free on Netscape in the same spirit of discovery in which you have embarked, and let the free-for-all commence. Let everyone see what everyone else comes up with! How shall you evaluate the outcomes of this class? In terms of wonder, fascination, and noise.

CHAPTER 4

SURFIN' THE MEGAPAGE

MegaResources for K-12 teachers across the curriculum

A megapage is a home page that contains links to lots of sites. A great way to find tons of information and resources is to find some key megapages and then surf away. With so many sites on the Internet, each one better than the one before, it would be pointless to try to say which ones are best. In the discussions and Browser's boxes below, you find more than fifty WWW sites that you just cannot afford to miss if you're seeking resources for teaching. Some of them contain ready-made lesson plans, and others supply you with the information you need to design lessons that will be goal oriented and meet the objectives of the curriculum in your school district. Some of these sites are free of charge, for others you have to pay to gain access: The Internet started out almost entirely free, but as more and more people make their goods and services available over the Net, it is only right that they charge for their work.

These following megapages are organized not in order of importance but according to some basic curricular areas, except the first one, which offers general resources. Sick 'em, Browser!

General resources

The home pages in this first batch are all so useful to the classroom teacher, I'd bookmark them all, if I were you.

GASMAIN—Georgia Science and Math Academic Initiative Network
http://teams.gatech.edu/~chris/edlist.html

A table of contents with multiple links in nine categories to sites all over the world: Places to Go, Schools, Curriculum Guides, Resources, CU-See Me, Government, Kid's Stuff, Miscellaneous, and Bunches of Others. Three further links are Museums, Exploratoria, and The Franklin Institute. Check out the Curriculum Guides as an especially teacher-friendly way to expand your sources for a lesson or unit. ERIC is there, too. GASMAIN is a gold mine—one of the main resource collections on the Net. You will need lots of time to explore this site fully, but take the time. If you explore a link a day, that should take you about four or five months. An easier way would be to assign your students to explore "a link a day," and report to the class what they find.

KidsWeb
http://www.npac.syr.edu/textbook/kidsweb/

A table of contents with listings for Arts, Sciences, Social Studies, and Miscellaneous. When you click on one of the four categories, you are presented with another, more specific table of contents. Under Arts, for example, you get links to Art, Drama, Literature, and Music. Under Sciences you can find links from Biology to Mathematics. The same type of branching occurs in Social Studies and Miscellaneous. There are links to other digital libraries, too.

Vose School Educational Resources
http://www.teleport.com/~vincer/starter.html

Example of a home page designed and maintained by a school, and a standard to aspire to! Like GASMAIN, Vose School presents you with more resources than you'll have time to use. Some of them are duplicates found on other lists, but some are unique to Vose. I especially like the "Kidopedia"—an encyclopedia designed by kids for kids to use. Truly unique. This is an idea you can use in your classroom. Have your kids define things as if they were making up an encyclopedia. Beyond screens full of information, Vose School itself is online: Teachers and students share with one another and with you what they are doing on the Internet, information on how they are using the Internet in their classrooms. Lesson plans, work done by the kids, ideas that you can adapt for your classroom—if it works at Vose, it'll work for you. Vince Ruggiano, Vose

Webmaster, updates the home page regularly and keeps the wealth of information timely for the teachers at Vose and for you.

Education Central WWW Page
http://www.ehhs.cmich.edu/

Maintained at Central Michigan University, has links to everywhere, from world news and weather, to what is happening with Michigan's educational system; especially useful for ideas in, and links to, curriculum areas.

EINET Galaxy
http://www.einet.net/galaxy.html

A big page with hotlinks to the following: Arts & Humanities, Business and Commerce, Community, Engineering and Technology, Government, Law, Leisure & Recreation, Medicine, Reference and Interdisciplinary Sources, Science and Social Science. Each one of these links leads you to education sites related to these themes. If you can't find it in "the Galaxy," it probably can't be found! Education is listed on this site, almost at the bottom—keep scrolling until you find it.

Classroom Connect
http://www.wentworth.com/classroom/

Home page of Wentworth Worldwide Media, Inc., links you to Wentworth's *Internet Newsletter*, K-12 Resources on the Net, Lesson Plans, Pointers (i.e., links), and Lots More. This megapage is updated twice a week—these people are serious about teaching with the Internet! I like to stop at this site periodically just to see what's happening. Subscribe to their *Internet Newsletter*: Each edition is full of good information about some aspect of the Internet, as well as lesson plans, pointers to other resources, and a call for keypals.

Kid List
http://www.clark.net/pub/journalism/kid.html

Seems to be misnamed: It should be "Teacher List." Currently with some 50 hotlinked sites, *Kid List* keeps growing and getting better. *Kid List* is a site that has received the "Top 5% Website Award"—not a quality judgment, but a statistical report of a site's popularity. Inkspot, for example, is a resource for children's literature writers, offering an online writer's workshop and even a young writer's workshop. You can also visit NASA, Museums, Exploratoria, and Legos. Worth a bookmark.

Mai HomePage

http://www.brown.edu/Students/Brown_College_Democrats/maiway2.html

One way to access Gopher Jewels: 58 sites in GopherSpace that deal with what we teachers do for a living. Jeffrey Mai's home page is special because he has listed so many links in one spot; it makes surfing as easy as taking a warm bath. A resource of resources.

Scholastic Network 1995-1996

http://scholastic.com:2005/public/Network95-96.html

Already has next school year outlined. Nine major themes integrate five areas of the curriculum: math, science, social studies, language arts, and technology—an excellent resource for teaching ideas. Of the nine themes for '95-'96, three are dinosaurs, Dr. Martin Luther King, and ecology. Full access to this site requires a subscription.

Steve's Dump

http://forum.swarthmore.edu/~steve/steve/education.html

See the general "dump" and the "dump" for education; both are great dumps. Steve's education dumps will take you to ERIC resources, field trips, lesson plans, and other great stuff that you can use immediately in your classes. Bookmark it!

Academy One

http://nptn.org/cyber.serv/AOneP/

An international resource for teachers and students, offering foreign language exchanges, bird migration watches, a student news Network, and even the Iditarod Dogsled Race project. The curriculum database and index to online projects are a teacher's toybox. Finding good simulations online is never easy, but Academy One offers several, from the stock market to outer space. This is a for-pay site.

Britannica OnLine

http://www.eb.com/

"Your Gateway to a World of Knowledge"—the full power of the Britannica at your fingertips, but you have to pay.

Grolier's Encyclopedia

http://www.wwa.com/grolier.html

Used to be for free, and at the time of this writing, the site is down. I believe that an expanded version will reappear as a site for pay. Old *Grolier's* contained

more than 30,000 general interest articles, updated regularly, and was easy for kids to read.

Governmental Department-of-Education sites

The Department(s) of Education in several of the States have posted megapages that link to many resources that educators in those States have found helpful. I list three of these in Browser's box, but you can search for other State Departments of Education by going to this URL: **http://www.webcom.com/~piper/state/states.html** —a generic home page for *State Government on the Net*. At this site, find governmental resources for every state in the union. To find the State you want, click on FIND and write in the name of your State, then look for the links to the Department of Education. Not every State's Department of Education is listed yet, but more are being added all the time.

Goldmine—California Department of Education
http://goldmine.cde.ca.gov/

California curriculum frameworks, California legislation as it relates to schools and education, and links to lesson plans and other resources.

TENET—Texas Department of Education
http://www.tenet.edu:80/

Links to hundreds of sites in Texas as well as what's left of the rest of the world. The TENET home page is something to see! It is not only a Texas-sized list of locations in literature, reading, math, science, social studies, art, and very much more but also it is definitely cutting-edge in the educator's intelligent use of the Net.

U.S. Department of Education
http://www.ed.gov/

Read the mission statement of the U.S. Department of Education and the National Educational Goals, access education guides, and link to "other educational resources." Not so impressive as TENET, but then the U.S. is not Texas.

And now, a word from our sponsor

ERIC
http://ericir.syr.edu

Instead of going through another site, access the United States Department of Education's Educational Resources Information Center directly. All teachers know about ERIC—you can hardly write a term paper in the School of

Education without quoting an ERIC abstract as though you had actually read the article. Ever since getting online, I have relied on ERIC for lesson plans, AskERIC (specific questions answered), ERIC Digests (state-of-the-art summaries of hot topics), and increasing numbers of full-text articles about the world of education. The ERIC site is easy to access and easy to search.

Among the home pages of the several ERIC clearinghouses and other installations, I highly recommend the *ERIC/REC* home page—
http://www.indiana.edu/~eric_rec/index.html

Here you can find out the meaning of the ERIC/REC acronym, read about family literacy, parenting, teaching, and learning. The ERIC folks are doing great things on the Web, going full-steam ahead with online education via the Internet. Indeed! Watch for my own Web course at the ERIC/REC Distance Education Website—online, for-credit, for teachers: "How to Teach K-12 Using the Internet." Coming soon!

Science resources

NASA—National Aeronautics and Space Administration
http://hypatia.gsfc.nasa.gov/NASA_homepage.html

Offers a wealth of goodies for teachers and students as well as hotlinks to many other home pages of scientific interest. Two other NASA sites are *Educational Resources OnLine*—**http://www.nasa.gov/nasa_online_education.html** —a megapage in and of itself with tons of resources, and *NASA Humans in Space Project*—**http://medlib.jsc.nasa.gov/intro/humans.html** —a site where you and your students can get answers to questions about the psychological and physiological effects and environmental aspects of traveling and living in space. The other NASA sites on the Web are all excellent, too. You'll probably find these sites very busy and hard to log on to; at all times of the day and night, I've been successful about one time in three. It's worth the wait.

Nine Planets Tour
http://seds.lpl.arizona.edu/billa/tnp/

A truly phenomenal megapage, on which you will find out everything now known about the planets of our solar system; moons, orbits, the Hubble telescope and its photos of outer space, and much more. Turn your budding scientists loose at NASA and give the world its first extraterrestrial colonists!

Virtual Frog Dissection Kit

http://george.lbl.gov/ITG.hm.pg.docs/dissect/info.html

From the University of California at Berkeley and the Lawrence Livermore Labs, the Virtual Frog is a good way to familiarize your students with the anatomy of the frog without having to breathe formaldehyde or handle a dead amphibian (a major disappointment, I admit, to a true-hearted future biologist). With a color monitor, you can see MRIs of internal organs, the relationship of the internal organs to the skeleton, the body systems one at a time or altogether. You can rotate the frog to see it from almost any angle. The Frog Kit is a superb application of virtual reality to classroom learning. Use of this site requires advanced computer equipment in your machine: a browser that supports "Forms" and "Images" and an MPEG or QuickTime movie viewer.

A Dream of Flight

http://www.mcn.org/MenComNet/Education/CUR/FLI/Flight.html

An excellent, ready-made lesson on the net, just waiting for you to download and use it. I was going to do a unit on "Flight" for this book, until I saw that the lesson I had in mind had already been developed. Focused for fourth- to sixth-graders, "A Dream of Flight" is easily modifiable. This is a must-see address on the net, and one to which you will be coming back as the *Living Curriculum*—

http://www.mcn.org/MenComNet/Education/CUR/curhome.html —the work of the Mendocino County Office of Education, continues to upload its well-nigh perfect resources for teachers. How long is your bookmark list, now?

Entomology

http://www.colostate.edu/Depts.Entomology/ent.html

It's downright crawling with resources to 50 or more "bug-related links." Your youthful entomologists will be fascinated to see the photographs, drawings, biology databases, online insect databases, and more.

SAMI (Science and Math Initiatives)

http://www.c3.lanl.gov/~jspeck/SAMI-home.html

Has a Chatback Line, Mathematics and Science Curricula, as well as Other Resources and Rural Resources, all worth viewing. Good for doing science and math together.

The Hub

http://hub.terc.edu/ (or email: hub-staff@hub.terc.edu)

Especially for high-school math and science teachers, you can publish reports, develop curricula, and write grant proposals.

Literature/Language Arts Resources

Shakespeare Headquarters

http://the-tech.mit.edu/Shakespeare.html

If you are studying the Bard, you must visit here and see all of his comedies, tragedies, sonnets, and poems, along with a wonder of an interactive glossary. When you are reading the text and you come across a word you do not know, click on it, and the glossary will appear, telling you what the word meant during Shakespeare's time.

Gutenberg Project

http://med-amsa.bu.edu/Gutenberg/Welcome.html

A site with hundreds—thousands—of electronic texts (called "etexts") online, and more being added every month. Here you can read Mark Twain, Shakespeare (a mirror source to Shakespeare Headquarters), Herman Melville, Grimms' Fairy Tales, Aesop's Fables, Lewis Carroll, Edgar Allan Poe, Joseph Conrad, and the list goes on. (A mirror site is the same information accessible at more than one address.) If you have any teaching responsibilities involving literature, this one is unavoidable for your bookmark list.

Resources for interactive projects

With more classrooms getting connected to the Internet, there are more and more interactive projects out there. Mayaquest, Jason, and the International Arctic Project of 1995 are but three. The last project is sponsored by Scholastic and Shaklee International and it follows an explorer and his dogs on an arctic expedition. The expedition is happening right now while I am writing this book, so that students and teachers in summer school this summer, and coming back to school in the fall of '95, can take part interactively in that project via the Internet. You get weekly updates of the trek, views of the dogs, and you can almost taste the snow. Check out this project on at this URL:

http://scholastic.com:2005/public/IAP/IAP-Home.html

To see how good your search capabilities are, find the addresses for Mayaquest and Jason on your own. These sites will also keep you informed of other interactive projects that are happening on a net regularly.[1]

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[1] I couldn't resist. The Jason Project—**http://seawifs.gsfc.nasa.gov/scripts/JASON.html**—is now six years old. You'll have to find Mayaquest on your own!

Culture and language resources

The Internet is, above all, people communicating with other people, whether your best friend at the same school or with people around the world whom you do not know and probably never will know, except virtually in the ether. Contrary to the oft-heard idea that computers depersonalize learning, computers now do more to put learners in contact with other learners, people with people, than does any other communication medium. Help your students achieve global interpersonal dialogue by building keypal relationships (see chapter 2) and also by plugging into websites that link your students to other people, other languages, and other cultures.

World Cultures
http://info.pps.pgh.pa.us/k12/culture.html

A megapage with hotlinks to lots of other home pages dealing with the various aspects of human cultures: General World, African-American, Asian, European, Libraries and Exhibits, and The Americas. From this page you can tour the Kremlin or Paris, go to several UNESCO heritage sites, view the symbols of Malaysia (national flag, car, etc.) or virtually go to places in China that you might very well not be able to visit as an actual tourist.

Human Languages Page
http://www.willamette.edu/~tjones/language-page.html

A single address at which you can find out something about almost every language spoken on earth. Check out the easy ones, first, with which you may be acquainted, such as Spanish or French, and then try any other language you can think of—Croatian or Basque or Afrikaans—including languages that are no longer spoken, such as Middle English. This page is huge.

SunSite
http://sunsite.unc.edu/index.html

Resident at the University of North Carolina, this site offers many language opportunities: You can listen to Asian music, read about Dazhdbog's Grandchildren (Russian), see the Gaelic home page, or view pictures of Chinese signs in Hong Kong.

The Department of Foreign Languages and Literatures at UNC
http://www.acs.appstate.edu:80/~griffinw/

A home page with links to other home pages about Spanish, German, Chinese, Russian, French, and Latin. Look at the general page, or go to these specific pages about the language and culture represented.

The French Page
http://www.acs.appstate.edu/~griffinw/french.html

The Spanish Page
http://www.acs.appstate.edu/~griffinw/spanish.html

The Chinese Page
http://www.acs.appstate.edu/~griffinw/chinese.html

The Russian Page
http://www.acs.appstate.edu/~griffinw/russian.html

The Latin Page
http://www.acs.appstate.edu/~griffinw/latin.html

The Japanese Page
http://www.acs.appstate.edu/~griffinw/japanese.html

The ESL Page
http://www.acs.appstate.edu/~griffinw/esl.html

Each of these pages starts off with information about the department and faculty, but scroll down until you find links that deal with the country and language. Bookmark the language and culture that you're working with.

History and social-science resources

The American Civil War is studied in the 5th, 8th and 10th or 11 grades in most districts. Sometimes the battles are recreated, and dry and dusty old history lessons have recently come to life thanks to the splendid Ken Burns PBS documentary.

Visit the *American Civil War HomePage*
http://cobweb.utcc.utk.edu/~hoemann/cwarhp.html
where you will find timelines, maps, documents, diaries written by young and old alike, pictures, and more. This site is a special hit with middle-school teachers, but if you teach any aspect of American history, you will want to add this site to your list of bookmarks.

EdWeb (part of the home page of the Corporation for Public Broadcasting)
http://k12.cnidr.org:90/
Has a link leading to a page titled *Teaching Resources for Historians*—**http://grid.let.rug.nl/ahc/teaching.html**—on which further links connect you to other home pages on topics such as the American Revolution, study out-

lines on the Jewish Holocaust in Europe, archeology, and several other subjects of historical interest.

Coming soon at DeweyWeb is *WebICS*
http://ics.soe.umich.edu

A series of simulations, such as *The Arab/Israeli Conflict, International Poetry Guild, Earth Odysseys: Electronic Field Trips,* and *World Forum: Viewing the World through Others' Eyes.*

School sites

Especially if you are a newcomer to the net, visit any of the many megapages developed by elementary, middle and high school students and/or teachers. It helps to see what others are doing. I get ideas for lessons, projects, and home pages from these sites. A visit to these sites is a celebration of the democracy of the Internet.

Gleason Sackmann's K-12 World Wide Web Sites
http://toons.cc.ndsu.nodak.edu/~sackmann/k12.html

The first place to visit, a megapage list of many school home pages. After you have made up your school's home page (see chapter 18), you can add it to this site. It's fun to see your school listed on a megapage: "Look at us, there, right out where the whole world can see us!" Internet brings the world to your classroom, and it can take your classroom to the world.

Global Show-n-Tell Exhibit
http://emma.manymedia.com:80/show-n-tell/
(or e-mail: **show-n-tell@manymedia.com**)

Allows little people (and big ones, too) to share with others about their favorite possessions, projects, and accomplishments. A great site for primary and elementary students, there are stories, drawings, and home pages of other little kids like yours. The beauty of the site is the ease with which you can fold it in gently into your own class: Your students are invited to add their own show-and-tell to the site.

Project City Elementary School Home Page
http://www.shasta-co.k12.ca.us/www/projectcity/PCHOMEPAGE.html

A great example of a school-wide home page. I particularly like Mr. Keeler's 4th-grade World Wide Creative Writing Project. Check it out! An interactive project, your own students will have fun taking part, and they might spin off their own project that will suit them even better. Another link on this home

page (keep scrolling, you'll find it) is to Children's Pages—**http://utwpue.wb.utwente.nl/~fjodor/pages.for.children.html** —just plain fun!

IN YOUR CLASSROOM:

How to teach, using the Internet

Here's an exercise—not for your students but for you—to do with just one megapage: Go to the *Franklin Institute of Science*—**http://sln.fi.edu/tfi/welcome.html** — scroll down the page and click on Units of Study. You will find a unit titled "Wind Our Fierce Friend"—all planned and ready to go. Study the plan and see how you might modify it for your class, aiming at a goal, developing the rationale, identifying some objectives. Use procedures that you know will work for your kids in your class, and keep high interest uppermost in your mind. After the lesson has been taught and learned, with the kids' grimy paws all over the keyboards, and you are evaluating how much learning was accomplished, ask the kids for help: "What did you like about that lesson? What did you not like? What shall we do next?"

Serendipity works as well on the Internet as it does in the library. As you are clicking here and there to learn about the stock market or the weather or the news, go ahead and allow yourself to get sidetracked! Click around to see what other good stuff—especially plans for great lessons—will pop up. Have you ever had so many lesson ideas at your fingertips before? Indeed, the main rule for teaching with the Internet is this: Click around and see what you can find! And the longer your bookmark list, the better.

CHAPTER 5

JUST FOR THE LITTLE KIDS

The not-quite-two-year-old Cyborg

A colleague of mine has a seven-year-old and a 23-month-old. The seven-year-old is already a computer whiz: He plays games, does his own Net searches for more games, is knowledgeable about both hardware and software, and has even started doing homework on the family computer. His little brother had mostly been watching.

One hot day, when Mother and Sons came home from a grocery-shopping expedition, the 23-month-old imperiously commanded: "'Puter, Mommy! 'Puter!"

"In a minute, honey!" my friend replied, wiping the melting ice cream off her elbow.

Impatient, the younger sibling scrambled up the stairs to the computer room, and in a few seconds, my friend heard the "Ding!" that told her that someone had turned on the computer.

"He can't hurt it or himself," she thought, and finished putting the groceries away, and then forgot all about it. Thirty minutes later, she remembered—stillness in a house full of kids is a loud warning. Up the stairs she went.

The less-than-two-year-old had turned on the switch at the surge blocker, negotiated the main menu, found the game he wanted, and was now blissfully wrapped up in 'puter play.

What 4-5-6-7-8-year-olds can do with the Internet

How young can they learn? It's a question of motor control, not of mind—the mind is ready to learn at birth (and, some would say, before birth). For you, teacher, the point is this: Your kids are probably already inherently better at 'puters than you are because they are younger, naturally meddlesome, full of monkey curiosity, and many of them grew up with these machines as familiar as TVs, whereas you did not. More importantly, kids' minds are like a whole roll of expensive paper towels: They can soak up almost as much as you can pour on them, and at an early age. Have no hesitation about presenting sophisticated Internet instruction to even your youngest students. What they can't execute on their own, they can watch and learn from, and they can understand just about anything you tell them, if you use words that they know or can guess.

The Internet is full of links and ideas for 3-4-5-6-7-and-8-year-olds, not to mention 23-month-olds: stories, games, pictures, and just the sheer fascination of watching the world blip and bleep on a screen before their very eyes. Just as *Sesame Street* gave a whole generation a head start with reading readiness, the kids raised by computer games are going to be ahead with a variety of skills: small motor control in their fingers, hierarchical logic (finding their way along paths and down menus), spelling (one has to be precise when keying in http addresses), and keyboard writing readiness (it's easier to type than it is to wield a pen or pencil).

Little people can surf the Net, drive the engines, download the files, and play the games just like big people, though they may need a bit more help. You probably will not have all your little people working with the Internet on a daily basis, but my guess is that you will find them eager to log on. As the story of my friend and her not-quite-two-year-old indicates, kids and 'puters are natural allies. If you have a computer in your classroom, there's no reason for it not to be in use by someone all the time. Getting some of them to leave it alone will be a bigger problem than getting most of them interested in it! So, even in kindergarten and the primary grades, make the Internet an integral part of your curriculum; it can teach so much and with so little effort or stress.

One problem you will confront is the age-old problem of the have's and the have-not's. Some young kids have computers at home, and they will come to your class already computer literate and ready to turn on and log in. Others not only will not have computers at home but also they will never have even touched a computer keyboard. In our time, the computer have-not's are seriously at risk in the scramble for knowledge, and it is your job as a teacher in a democracy to help make computer equality a new amendment to the Constitution.

IN YOUR CLASSROOM:

Computers belong in the primary grades

Right now, I'm seeing lots of kindergartners coming to school who already know how to operate a computer. They can turn it on and off, identify letters on the keyboard, and use rudimentary hunt-and-peck typing skills to access and work on the programs that they know. Your students who have this much skill can also access the Internet. Your other students will need your help to catch up, but given your help, they will catch up fast.

The computer in and of itself is an excellent resource for teaching left-to-right reading orientation (a desperately needed corrective against the evil effects of watching too much television), symbol-to-letter recognition, sound-to-symbol recognition, and word-to-symbol recognition. On the other hand, not all grown-ups like computers, and neither—you may be sure—do all kids. Children whose "frame of mind" is dominantly bodily-kinesthetic (as Howard Gardner might put it) may have trouble sitting still for computer time. Let's not make the mistake that has been made so often in the past: This new technology, though it may be the best thing since sliced bread, is not as appealing to some as it is to others, and it will not work equally well for all. (Not everyone likes sliced bread, either.) Let's not persecute the kids who don't like computers.

When you involve your students in an e-mail activity, they will begin to communicate with one another on a plane quite different from the ordinary. E-mail gives adults instant intimacy and an ability to work together without knowing one another well. I do not know what goes on in the minds of little kids as they face a screen with a message on it from their peers, but an equally powerful mental alchemy is at work, and it is good. Minimally, the e-mail experience seems to help little people get out of their ego-centered stage in kindergarten and first grade, so that they can start thinking about, and with, others.

Internet work is trickier with little ones, but not impossible. Peer collaboration is one excellent way to go: Work with a teacher in a higher grade, and set up a couple of times in the week for your little guys to partner with the older kids. To make maximal use of the available computers, some of your kids could go to the other room, and some of the other kids could come to your room. With this computer-buddy system—one little kid and one big kid (or two and two around a single computer, taking turns)—your students can surf the Net, play computer games, read files, compose e-mail, download programs and games and files, carry on a keypal correspondence

with someone somewhere overseas (or across town), and compose their own literary masterpieces.

See chapter 2, "E-pals and keypals," for addresses of listservs that specialize in electronic penpals, even for the little guys. In addition to those sites, Browser has sniffed out two more: *Hoffer Elementary School* and *Murphy Ranch School*, both accessible at this URL:

http://cmp1.ucr.edu/exhibitions/hoffer/home/hoffer.e-mail.html

Take a look at the e-mail books these second graders are publishing.

In situations where the younger student has a text in his or her head but insufficient skills to write it down, the older student can act as keyboard amanuensis. Taking dictation from the younger buddy is good writing practice for the older buddy, and, then, reading the print-out will prove to be an altogether inspiring "language-experience" literacy event for the not-yet-quite-literate author.

This approach is good for both sets of kids for more reasons than just teaching them 'puter skills. The bigger kids learn about patience, along with listening, asking, clarifying, helping, and giving feedback, not to mention typing, spelling, grammar, and reading skills. (Reassure your young peer tutors that they can ask you for help, if they get stuck.) The littler kids learn how to compose their thoughts and dictate them in a logical manner, how to answer questions intelligently, how to correct an older person thoughtfully, and how rationally to get what they want. Both kinds of kids learn how to get along with one another.

After your students have worked with e-mail and are comfortable with their cyber-buddies, they can venture out onto the Internet together. At first, I thought FTP/Fetch was too difficult for 6-year-olds. That notion lasted until I saw home pages that had been made by 6-year-old kids—and some even by 4-year-old kids! These youngsters have set up home pages comprising their own stuff plus documents from ftp sites, Gopher sites, and WWW sites.

PeanutNet

David's Home Page
http://www.charm.net/~jcain/david.html
The author is four years old and he loves snakes.

Elizabeth's Home Page
http://147.126.104.110/lizzy.html
The author is six years old and she has figured out how to mount a home page that blinks.

Emma Bowen's Home Page
http://www.comlab.ox.ac.uk/oucl/users/jonathan.bowen/children/emma.html
Emma is seven years old and she lives in Oxford, England.

Jessica's Home Page
http://www.itp.tsoa.nyu.edu/~student/mags/jessy/jessy.html
This seven-year-old autobiographer and illustrator uses hotlinks to progress from one page to the next through the chronicle of her life.

Because Internet resources are read-point-and-click interfaces, they are not technologically difficult for youngsters to access. Good WWW browsers like Netscape or Mosaic have graphics and sound capabilities that make them ideal for younger kids. Computers equipped with audio programs and sound cards and video capacities make the Web just that much more appealing to kids.

The Web, especially on Macs, is icon oriented, which makes pointing and clicking easy for beginners. If you have some bookmarks to sites of high interest already loaded, that will make the process easier still. Many home pages are quite graphical, with pictures and very brief explanations that are relatively self-explanatory. There are even coloring books and stories that your students can access. Browser especially likes kids' pages; Browser especially likes kids.

Internet for little guys

Theodore Tugboat
http://www.cochran.com/TT.html
This comprehensive and fun home page of a Canadian television program is new every day, and you do not need to have seen the TV program for the activities to make sense. Kids love the interactive storybook with pictures, the coloring book, and the hotlinks for kids to other places they like to go on the Net. There are links for parents and teachers, too.

The Children's Page
http://www.pd.astro.it/forms/dearlife.html
If it's still there, this is a great page: links to pictures and exhibits of raptors, frogs, dinosaurs, and other nifty critters; the Lego Robot in Norway; what kids in Venice (Italy) had to say to the U.N.; the wonderful and amazing images of *Planet Doug*. The last two times I tried to access *The Children's Page*, alas, I got "404 Not Found" and "403 Forbidden." I hope it's not gone for ever.

Kids Did This

http://sln.fi.edu/tfi/hotlists/kids.html

This hotlink collection of kid-generated stuff starts out with this warning: *It's a challenge to keep up with kids on the Internet, but we're trying. Our hotlist of student-produced stuff became too long for one page! Explore the topics that interest you. One word of caution: Some student-designed pages take extra time to load. Caveat surfer.*

Kids Space

http://www.interport.net/kids-space/

Where you can read stories written by kids, view their paintings, ask a doctor for advice, or switch languages from English to Japanese. The youthful authors proclaim their "page is rated G," and it is.

The Falcons' Nest

http://www.northstar.k12.ak.us/schools/upk/w3library.html

"A World Wide Web project being undertaken by the students at University Park elementary in Fairbanks, Alaska" (as the authors inform their readers). Select among ten HyperCard stacks ranging from Saturn to African Animals to the Circulatory System, all downloadable to your computer for use with HyperCard. You can also view student work, student home pages, Alaskan history, find out about the Riverboat Nenana, Fairbanks, Alaska weather, and the Alaska gopher. The kids at University Park are willing to be Alaska keypals with your class.

Also in *The Falcon's Nest*, visit *Mrs. Angianak's Home Page* to see what second-graders can do. Her kids have written bios for the Web with links to their favorite places—a good start at making individual home pages of their own. The graphics are especially interesting—pictures of the Aurora Borealis are linked to one of the pages.

Netscape told me that *The Falcon's Nest* was "Empty," the last time I tried to access it. Maybe the young falcons had flown away for the summer, and they'll be back. I mention missing Websites to keep you reminded that on the Web, things come and go. When you are planning lessons, always have a couple of back-ups at the ready.

Since even before *Jurassic Park* and Barney, dinosaurs have long been a favorite of most primary-age students. On several lists of "kids' favorites" and "what's cool for kids," the following *Dinosaur Homepage* is listed:

http://ucmp1.berkeley.edu/exhibittext/entrance.html

I've read it from top to bottom. It is not made for little people. It is informative and interesting, but it is also complicated. Check it out and judge for yourself whether it's right for your kids. If you decide to teach your primary students using the *Dinosaur Homepage*, I'd be curious to know how it went. Send me some e-mail.

Internet favorites of kids

Besides big things like dinosaurs, little kids also like small wiggly things.

The Froggy Page
http://www.cs.yale.edu/homes/sjl/froggy.html

It's just right for certain kinds of pro-green primary kids. This home page has links to scads of frog-type documents, graphics, fun things to do, and even coloring pages. If you want to delight your 6, 7, and 8-year-old herpetologists, click and point them to *The Froggy Page*.

Explore the Internet with Dr. I
http://ipl.sils.umich.edu/youth/DrInternet/

A great site for science-minded kids who want to know more about dinosaurs, volcanoes, weather, earthquakes, and geology. Other access to Dr. I can be gained through a mirror site— **http://www.state.lib.ut.us/childlit.html** —but I've sometimes had trouble getting this address to work.

A site for kids and parents together

Parents and Children Together are read-along stories for parents (or teachers) and kids, ages 4-10, and can be found at the home page of the *ERIC Clearinghouse on Reading, English, and Communication (ERIC/REC):*

http://www.indiana.edu/~eric_rec/fl/ras.html

Several stories are available already, and the ERIC folk have three years' worth of monthly read-along stories that they are aiming to put on-line. Soon, the stories will be accompanied by on-line audio narration.

Quick and easy ways to get your kids published on the Web

Because the archival capacity of virtual space on the Internet is practically infinite, all the old constraints and cautions of the hard-copy publishing world are now out-moded. Now, everyone who wants to can get published electronically, and if you can't find a place that looks just right to place your electronic publications, you can set up your own electronic publishing company by merely saying so on your own home page. Your class can set up its own home page (see chapter 18, "HTML and

YOU") and publish whatever you and your students like. If you and your class go into the publishing business, you will want do so with the backing of your principal. Schools are accountable for the electronic publications of their students, just as they are for other kinds of school publications, so I advise you to take advantage of the wisdom of the ages collected in school journalism guides.

Browser is pointing to two existing sites where your kids are welcome to publish their own stories, and where they can read stories published by other kids.

KidsPub
http://www.en-garde.com/kidpub/

Also has a world-wide interactive story going, to which your kids are invited to add their own paragraphs. You and your students can see what other kids are doing in school. Encouraging and empowering, *KidsPub* is proof that little people can and do write good stories and get them published.

Put My Story on the WWW
http://ipl.sils.umich.edu/youth/PutMyStory/ is part of the *Internet Public Library* project **http://ipl.sils.umich.edu/index.text.html**

A chance for the fledgling authors in your room to write and publish their stories. I recommend that you visit both sites: the home page for teachers, the Put-My-Story site for kids.

Other sites besides these are available for young kids, but we could use many more such sites. This is a ripe opportunity for you and your class to take on the project of developing your own home page, going into the electronic publishing business, and linking up with anything that interests your 4-5-6-7-8-year-old students. Cyber-buddies, older with younger, can collaborate to design, code, test, and upload a school home page with individual home pages for each of the grades or for the several rooms. See chapter 18 to get started on your own home page.

So much is possible by way of using the Internet to teach and learn:

- Read and discuss on e-mail electronic books, linking your class with one down the hall, across town, or on the other side of the globe.
- Go to *The Froggy Page* for ideas, and cross-reference to develop a lesson by hotlinking to frog fables and frog stories on other pages, all of which can be integrated by hotlinking to yet another page about frog habitat, all of which can be given a scientific bent by hotlinking to the *Virtual Frog Dissection Kit*

(if you have the stomach for that sort of thing). With this kind of electronic leap-frogging, you could hotlink an excellent Frog Unit together!

- Go to the *Internet Public Library* and see a kitchen science experiment by Dr. I(nternet); then see if it will work in your classroom.

As with every other chapter in this book, I would thoroughly appreciate your feedback and suggestions. Please help me build my online course on how to teach, using the Internet! Have you found any other good WWW sites for 'puter whizzes in the twenty-three-month-old to K through primary range? I'd love to hear from you—e-mail: *ecotton@oavax.csuchico.edu* Thank you!

CHAPTER 6

GO FOR FABLES, I.E., GOPHER FABLES

You've now had lots of practice with e-mail and a browser—Netscape, I presume—and if you've gotten this far, that probably means that you've had some success at finding things on the Net and are probably feeling optimistic about your skill as a surfer. You're ready for your next challenge: tunneling around in GopherSpace!

Gophering is another way of working with the Internet. Whereas Netscape and the browsers are non-linear, HyperText-oriented navprogs that allow you—almost without thinking—to bounce around from one location to another, Gophers make you think. Gophers are linear navprogs that allow you to go from one location to another on a straight line and require that you work your way down through a hierarchical filing system, from more general to more specific, looking for what you're looking for. Think of GopherSpace as a dot-to-dot picture: To see the complete picture, you must connect the dots in order using straight lines.

Let's jump in and try one so that all this talk will make sense. Double-click on the icon for your Gopher (TurboGopher if you have a Mac). An advertisement appears on your screen and then a screen appears that says *Home Gopher Server*. My home Gopher server is the University of Minnesota where the Gopher navprog was developed. In order to ensure that we are all looking at the same thing, pull down the FILE menu on your screen. Now, click on ANOTHER GOPHER, and you will see a dialogue box with four prompts. It looks something like this:

Title:	(leave blank)
Server:	**ascd.org**
Server Port:	**70**
Select:	(leave blank)

When you get this screen, type what is in the box above. Note that you can leave title and selector blank. The really important line is SERVER, for it tells your Gopher program where to go. Also note that the SERVER PORT is 70 because most Gophers live there. On occasion, you will be asked to put another number here, and when you do, just delete 70 and put in the new port number.

You are now in the the ASCD Gopher (which was the first good Gopher I found—yes, there are naughty Gophers out there). Let's say you want to check out current issues of *Education Leadership*. The file folders now on the screen all have brief descriptions of what is located inside of them, and the files are listed in alphabetical order. Scroll down until you find the folder labeled *Educational Leadership: The ASCD Journal*. Double-click on the folder, and you will see a screen offering several issues of the journal. Double-click on the one you want.

Gopher is not hard—it just takes a moment to dig to where you want to go! The problem is that because there are many files, many places to go, many selections from which to choose, there are a lot of different ways to get lost. When you are looking for something in particular, what do you do? You can attack the problem in one of these ways:

Four ways to go Gophering

1. Surf until you find it (which might take forever).
2. Search for the Gopher address as written in some known source (which means you already have to know where you're going before you start).
3. Do a Veronica search (explained below).
4. Cheat and use a Net Search browser: You can always search Gopher the easy way by treating it like any other Web resource. When you are in Netscape, and see a Gopher address, you can access it by typing **gopher://** and the address that you want. Sometimes you can guess at and hit a Gopher: When you are in Netscape, and see a Gopher address, find out if a mirror site is on the WWW by typing **http://** and then the Gopher address. It works sometimes.

To get good at gophering, you need to be able to decode a Gopher address. Browser has cornered a Gopher so we can look at it.

Gopher: **gs1.gac.peachnet.edu**

Choose: **Libraries/Curriculum Library/Science/Science Lesson Plans**

When you see a Gopher address like this one, here's what you do: Because you are tunneling to the *Peach Net Gopher*, go to FILE, pull it down and click on ANOTHER GOPHER. When you get the dialogue box, type as follows:

Title:	*Peach Net Gopher*
Server:	**gs1.gac.peachnet.edu**
Server Port:	70
Select:	

Hit Return and wait a couple of seconds. A series of files in alphabetical order will soon show up. Double-click (or—depending on your machine—arrow over, highlight, and hit return) on the file *libraries*, and a new screen will appear. Double-click (or whatever) on *curriculum libraries*, and yet another screen will appear. Double-click on *science*, and a further screen will appear. Double-click on *science lesson plans*. You have tunneled your way four files deep in *Peach Net Gopher*. It's time to look around: At this location you will find a tongue-in-cheek file of *fizzicks quizz* that will tickle your funny bone. You will also find some good science lessons that have been successfully used in other teachers' classrooms.

To make Gopher paths easy to read and follow, directions for tunneling through the Gopher maze typically look something like this in this book:

Gopher:	*Peach Tree Net*
Address:	**gs1.gac.peachnet.edu**
Click-on:	**Libraries**
Select:	**Curriculum Libraries**
Choose:	**Science**
Click-on:	**Science Lesson Plans**
Go for:	**fizzicks quizz**

Sometimes it doesn't work. When a Gopher is very busy, you might get a message like *Unable to resolve*. Don't worry about it. GopherSpace is a busy place. Try again later.

Try another: Here is a mirror site for ERIC. We found ERIC on the WWW, but you can also reach the same location using Gopher. The directions are condensed even more, but I think you will be able to understand them.

Gopher: **eric.syr.edu**

Choose: **AskEric/Lesson Plans/Technology Lesson Plans/Computing with Peanut Butter and Jelly Sandwiches**

This is the classic lesson about writing the directions for making a PB&J sandwich, and then applying that process to writing a computer program. The lesson is meant for 8th - 12th grade, but if you are teaching sequential logic to younger kids, it is also a good demonstration lesson. Bookmark the ERIC site; it has lots of great information.

Are you having any fun yet? If you follow the logic of how the addresses are written, you should have no problem getting around with a Gopher navprog. When the Gopher addresses get long, they do become difficult to remember. This is where SAVE BOOKMARK comes in handy, and Gopher bookmarks work the same way as Netscape browser bookmarks. If you like a site in GopherSpace, use SAVE BOOKMARK, and thereafter when you open your Gopher, you will see a bookmark page with your collection of the good sites you have visited and want to return to.

Dear Veronica

I said there were four ways to find information in GopherSpace: You can surf aimlessly, follow a pathway as you find it written in a source, use Net Search, or you can use the mighty search engine with the delicate name: Veronica.

Depending on whom you ask, *Veronica* stands for Very Easy Rodent-Oriented Net-Wide Index to Computerized Archives. According to another version, Veronica got her name because there was already an Archie (and there's a Jughead, too—compu-techies are nothing if not witty)! Veronica allows you to scan Gopherspace quickly for particular files and directories.

Here's how it works: Go back to the ERIC Gopher. Scanning down the file folders, you will probably see one with a question mark (?) in it. That's Veronica's signature. If no ? is there, then read the descriptions, looking for one that says "Veronica" or "Veronica Search" or "Search" (Compu-techies are not always consistent.) On

some Gophers, instead of any of the above, you will see an icon that looks like a pair of binoculars—that, too, is Veronica.

Double click on the ? (or whatever symbol is used) and you will get a dialogue box that asks what you are searching for. In the ERIC Gopher, I searched for "censorship" because censorship is a hot topic under debate over the Internet, right now. Give it a try, and you will find a host of articles about censorship, including some on Internet censorship. (This search happens to have been a lot easier than some others I've done.)

To try another Veronica search, this time for fables, let's chase a different Gopher:

Gopher: **unix5.nysed.gov**

Path: **Search the Internet/Veronica Server at NYSERNET/fables**

The New York Veronica is very large search engine. Scroll down the list and look at all the different ways you can search the Internet, then double click on **Veronica Server at NYSERNET**. A dialog box will appear in which you type your search terms. Gophering for fables, I typed "fables," and a large list of fables was generated. I clicked on **mini lesson on writing fables** because it has some good ideas about the general format of a fable (and grasp that concept is an objective in the lesson that follows). You will also see that a ton of fables is listed. Don't become distracted by them—we'll find our fables another way. To find more fables, go for the Gopher at the University of Minnesota, using this address:

Gopher: **micro.umn.edu**

Path: **Libraries/Electronic Books/By Title/Aesop's Fables**

At this site you will find over 300 fables, and you can copy them all! To copy them, BLOCK the parts of the document you want, click on COPY, move over to your word-processing program and PASTE in the copied block. In fact, you can copy anything on the Internet using the same BLOCK/COPY/PASTE process, moving between the navprog and your word-processing program. Using my sweet little Mac, its word-processing program always at the ready when I am surfing the Net, I have BLOCKED/COPIED/PASTED whole libraries full of information, including most of the Net addresses that you see in this book. Veronica has served us well; now we have our fables, and we're ready to plan our lesson.

IN YOUR CLASSROOM:

Gopher fables

Fables are short, easy to read, easy for you to BLOCK/COPY/PASTE, easy to save on a diskette, and most people at any age enjoy reading them. You can do great things with fables in literature classes, social-studies classes, and art classes. Fables can be rewritten, changing the characters, setting, and dialogue to give them a contemporary ring, and changing the plot to relate the story to current events. After your students get a feel for fables, propose that they write their own. The only limit here—as with so much on the Net—is your own imagination.

Goal

To understand fables and their reflection of human behavior.

Objectives

Discover the basic elements of the fable by reading and analyzing at least three different fables. After reading three fables and discovering the elements of the fable, compose a fable.

Rationale

Fables usually have a moral or lesson that can be applied to everyday life. To have internalized the wisdom of a fable is to have gained a living skill. By examining fables, students learn about themselves and others.

Procedure

Have your students search Gopher for fables and copy any number of fables that appeal to them. (If your students are too young to enjoy this phase of the work, you can do the job for them.) Set the stage by reading one of your favorites to your class. Explain that all fables have a moral or teach a lesson. Read another favorite fable and ask them to determine the lesson or moral of that fable. Then compare the two fables according to the elements or parts of the fable: What is the action? How does it develop? According to the "mini-lesson," the elements of fable are as follows:

- animal characters (usually), with human qualities, wise or foolish, a story with a moral
- Beginning: setting, characters in situation
- Middle: explanation of what the problem is and how the characters attempt to solve the problem

- End: Moral or lesson to be learned from the story

After your students, either individually or in small groups, have identified these elements in their selected fables, and after you have engaged the whole class in a discussion of fables, their elements, and understanding the moral, then your students can try their hands at writing their own fables, following the pattern, breaking the mold.

Evaluation

Invite your students to read their fables to the class. Let the class act first as audience (enjoying the fable as storytelling, registering the aha! when the moral becomes clear), and then as critics, checking to see that the fables have the basic elements and follow the fable pattern.

This lesson may have your students on the Internet only at the beginning, unless you did the Gopher work for them. If they are old enough to do the work themselves, I recommend it. It takes longer, of course, and is messier, but we want them to get good at gophering.

Gopher tips

Pay attention to the pull-down menus: FILE, EDIT, GOPHER, HELP, SET UP, and RECENT.

FILE allows you to Start Another Gopher, Print Screen (or more than a screen), and Quit. (In any computer application, it's always a good idea to remember where the Quit command is located.)

EDIT allows you to Copy, Cut, and Paste items between Gopher and your word processor or another file. You can also Search for specific words in a Gopher document—this will save you from having to read a whole file to find something specific that you're looking for.

GOPHER offers you Show Bookmarks and Save Bookmarks. Needless to say, **ascd.org** is one of my Gopher bookmarks. Saved bookmarks grant you instant access, no hunting and pecking. HELP (unlike some Help menus on other applications) is pretty helpful. Make some time, click on HELP, and read yourself into GopherSpace.

SET UP will allow you to scroll down to Font and Size. You can adjust both of these to suit your screen and your eye. I have mine set at Geneva 14—both easier on the eyes and easier to read than the default font.

RECENT gives you a list of sites that you have visited during this tour of GopherSpace.

As you go for Gopher more and more, you will notice that not all of the icons are file folders. You can see individual files, files with a ? in the middle, computers, and the like. These icons, allegedly self-explanatory, drive the literal-minded mad. Icons are obvious only to people who already know what they mean. Browser barks at icons.

Gopher jewels

Finally, here's a short list of some of the great Gophers out there:

Gopher Jewels
An actual Gopher site, this resource is loaded with information ranging from health to government, education, humanities, natural science, math, and more. The search engines and information and help pages work just fine. (Read the information and help pages before you try to work with *Gopher Jewels.*)

Gopher: **cwis.usc.edu**
Choose: **Other Gophers and Information Resources/**
Select: **Gophers by Subject/**
Go for: **Gopher Jewels**

Scholastic Gopher
This resource is probably worth the fee they charge. Check it out! Follow the pathway suggested below, and you get a lesson plan for "When I Was Young in the Mountains," a book by Cynthia Rylant written for 2nd-to-5th graders. Along the path to this plan, keep your eyes open for other interesting resources.

Gopher: **scholastic.com**
Server Port: **2003**
(This can also be written: **scholastic.com:2003**)
Choose: **Scholastic Internet Libraries/**
Select: **Reading and Language Arts Library/**
Click on: **Teaching With Literature/**
Choose: **Lesson Plans/**
(...checking out plans in other curriculum areas, as you pass by!)

Select: **Language Arts Lesson Plans/**

(Check out these plans, too!)

Go for: **When I Was Young in the Mountains Resources**

At the ERIC site, where we were before, look for the stock market simulation for high-school students. Your students can follow a stock, chart its growth, imagine their investment gains and losses, and high-stakes players in the market with play money. (You assign them a finite amount of money to start with, and then see which of your students will make a reliable investor.) A great lesson with high interest (money!) in real-world, real-life skills.

Gopher: **ericir.syr.edu**

Choose: **Lesson Plans/**

Select: **Social Studies/**

Click on: **Economics/**

Go for: **Learning about the Stock Market**

Mathematics Archives Gopher

Provides teachers with access to public domain and shareware software as well as materials for teaching high-school mathematics.

Gopher: **archives.math.utk.edu**

Go for: anything on the main menu

Ralph Bunche School Gopher

A little unusual: While it is common for schools to have their own home pages, it is not common for schools to have their own GopherSpace. The Ralph Bunche Gopher has a collection of science projects with lesson plans and samples of student work. I always like to know how a plan has worked, as well as how they say it's going to work. Ralph Bunche Gopher tells you.

Gopher: **ralphbunche.rbs.edu**

Choose: **Shadowy Science Projects Menu**

Best of K-12 Internet Resources via TIES
Includes news, online guides, books, and entry to other Gopher sites, as well as a good Veronica.

Gopher: **tiesnet.ties.k12.mn.us**

Choose: anything from the main menu that looks interesting

NYSERNet
The New York Educational Network's headquarters on the Internet. It offers a wealth of online resources for K-12 teachers who are using telecomputing tools in their classrooms.

Gopher: **nysernet.org**

Select: whatever you like: You will see menus for libraries, software, K-12, weather and more. Look at the Index to find out exactly what is at the site.

Gopher: **nysernet.org**

Choose: **Special Collections: Empire Internet Schoolhouse (K-12)**

Select: **School Reform & Technology Planning Center**

Go for: **Daily Report Card News Service**

On NYSERNet, take a look at The Daily Report Card (which you can get sent to you on e-mail or read in this Gopher archive), a daily, online newspaper of education.

If you're in Higher Education, you can read the *Chronicle of Higher Education* at Gopher sites—the post-secondary job market, the news of Academe, and the controversies.

Gopher: **chronicle.merit.edu**

You can see a mirror Website of the *Chronicle* at **http://chronicle.merit.edu**

Most Internetters judge Gopher to be very user friendly, once you know how to make it so. If you fight with Gopher, however, and refuse to treat it as it wants to be treated, that Virtual Rodent can be quite stubborn. Websurfers and Netscapers can say some ugly things about Gopher—no visuals, no good search engine, no audio or video, hierarchical arrangement of files—but the Gopher-loyal praise the oldie-but-goodie for being a quick, reliable, easy way to retrieve texts.

CHAPTER 7

FTP = FAIRY TALES, PLEASE!

FTP stands for File Transfer Protocol (ftp), a navigation program (navprog) that for our purposes here I am fey enough to say can also mean "Fairy Tales, Please." (For MacUsers, it's called *Fetch*; for IBM-types, it's called *FTP*. I'll refer generically to the process merely as "ftp.") If you know how to execute ftp, you use it to go out and get the full texts of folk and fairy tales that are available for free on the Net to be downloaded to your own computer and then used in any way you please.

FTP is a "first generation" navprog, so it is somewhat clunky and obstinate; however, once you know the ins and outs of ftp, it can become a handy and reliable tool to have at the ready in your Internet tool kit. To get ftp to work, you need to have a copy of *UnStufflt* (or *PKUNZIP* or *PUNZIP*, depending on the system that was used to zip the file in the first place. Usually, the ftp site tells you what to do.), downloadable for free from an ftp archive on the Net; however, you must unstuff (i. e., decompress or uncompress) even *UnStufflt* (or *PKUNZIP* or *PUNZIP*) before you can use it. If you feel insecure about this, send out a call to your local, friendly compu-techie, who will unstuff/uncompress the program and get it ready to go for you on your machine.

Full texts of long documents contain lots of information and, therefore, take up lots of space on the servers where they reside. For this reason, these files are compressed electronically so that they will take up less space, and therefore they must be decompressed for use on your computer. This sounds more complicated than it really is, and once you're set up and running, you'll never give it another thought.

At first, I was more unlucky than lucky with ftp'ing, and if you have ever tried to download some files using an anonymous ftp, you, too, may have turned away in

frustration. It's worth it to make a new beginning, however, because of all the neat stuff out there that you can get via ftp. So be a brave internaut, and try, try again—this time with a little help from your friend.

Archives on the Net are cram-packed full of software programs, both freeware and shareware and postcardware; lesson plans in all curricular areas; electronic versions of books and manuscripts; hypercard stacks; clip art, and audio and video clips, as well—all of it useful to you and your teaching, all of it great for your students and their learning. And the amazing thing is, it's all for free! Much of what they sell at software stores in the malls or through the catalogues and magazines, you can get on the Net at no cost. If, in some cases, the free stuff is not exactly like what is available commercially, you will find that it is very like it, just as good, and more than you'll ever need or use, but only if you know how to execute ftp.

You can find and access ftp archives by way of a browser like Netscape or Mosaic—good ol' Browser!—but once you have found what you want, you still have to know how to retrieve the files. In this chapter, I offer you some clues to the transfer process, suggest some anonymous ftp sites where you will find some of the stuff that I consider especially and immediately useful for us teachers, and then I conclude with ideas for a lesson on fairy tales (similar to the lesson on fables that you did in chapter 6 on Gopher fables). You might want to compare this chapter with that as a way to adapt my suggestions to your own approach.

This is also a good spot to warn you that ftp files are notorious carriers of computer viruses, so whenever you execute a file transfer, be sure to check it for viruses before you install the program or upload the file on your machine. (If you don't know how to check for viruses, holler for that compu-techie, again.)

If you have access to the Net with a graphical interface, all you need to do is type a few commands, and then point and click while using the FTP or Fetch program. If, on the other hand, you access ftp files through telnet, then you will need to have some knowledge of DOS commands—yet another reason to stay on the good side of your neighborhood techie. I assume that you have a graphical connection and an up-to-date ftp program.

Activate ftp by clicking on the icon and waiting for the advertisement to clear. When it does, go to FILE in the pull down menu and click on OPEN FTP. At that point, type in the address you want.

How to read an ftp address

Let's decode an ftp address so that this all begins to make sense. The "Anonymous FTP" for *PC Magazine* is below. *PC Magazine* is one of the most popular computer magazines in publication, and a version of it is available online.

Address: **ftp.cco.caltech.edu**

User Name: **anonymous**

Password: (your e-mail address or leave it blank)

Path: **/pub/ibmpc/pcmag/**

An ftp address looks similar to an e-mail address but without the @ sign. In this case, **ftp.** tells the computer that you are going to do a file transfer protocol; **cco.** is the name of the server or computer where the file resides that you are seeking; **caltech.** is the location of the computer; and **edu**—like a university e-mail address—tells the domain of the server: it's education, as opposed to government or commercial or some other organization. Indeed, CalTech is an educational institution.

Next comes the "User Name"—your name or the name you are using for this purpose. Most ftp addresses are called "Anonymous FTP" because, instead of requiring that you give your proper user name, they will yield up their riches to that most prolific composer of poems and songs, Anon. Anyone may access an Anonymous FTP, so at the "User Name" prompt, you type in "anonymous."

When the dialogue box asks for your password, you may type in your e-mail address—or you can leave the space blank. (It's like doing business with a low-level bureaucrat: Just give them something to write in that blank space; they don't care what.) When you type your e-mail address, you are telling the server who is accessing the computer site, a polite thing to do.

When the dialogue box asks for the "Path," you have two choices: You can either type in the whole thing or break it up in smaller parts. I choose the latter because that approach always works. If you are brave and think your computer can eat the whole thing at once, it's a shortcut to type in the complete path name without any breaks when the dialogue box prompts for it. It might work, and if it doesn't, you can always start over and take the clunkier approach. To do it the swift way, type **/pub/ibmpc/pcmag/** in the dialogue box, click on the OK button, and hope for the best.

The forward slashes— / —signal changes in directories or movement to a subsequent file. My computer program seems to get confused when there are too many /'s in a path name, so I take the less swift approach and break the path name up in smaller chunks.If you type in the path a segment at a time, it will go something like

this: The path or directory you are seeking is **/pub/** which stands for "public access." Click on it and you will see a list of files in alphabetical order (This reminds you of Gopher, doesn't it?). Click on **/ibmpc/** (IBM—the company—PC—the product, the basic subject matter of a magazine about so-called "personal computers" [What's impersonal about Macs, I ask!]); this sends you to the directory in which the file you want resides. Now scroll down the list of files to **/pcmag/** (*PC Magazine*), the file you're looking for. Now double-click on **/pcmag/** and click on the issue you want to download.

Practice at ftp'ing

Give it a try! Here's an Anonymous FTP address that every school teacher needs to be able to access with ease and style: AskERIC, the online service of ERIC—the Educational Resources Information Service of the U.S. Department of Education—where you can get answers to all your questions and help in searching for what you need to become an even better teacher. No fairy tale, try this ftp address:

Address:	**ericir.syr.edu**
User Name:	**anonymous**
Password:	(your e-mail address or leave blank)
Path:	**/ael/**

From this point, scroll down the list of files for the many ERIC "Clearinghouses," "Digests," "InfoGuides," "LessonPlans," and "MiniSearches & Q&A." (One reason that ERIC is so helpful to us teachers is because it helps us manage the information explosion. The WWW is full of an ocean of information, more than you will ever be able even to skim over by surfing, much less plumb the depths. The people at ERIC are there to help you find your way through this daunting, overwhelming, confusing embarrassment of information riches.)

Once you have found the ftp archive that holds the file you want, you must download the selected file from the archive; decompress it, if necessary; and put it in readable format. This is where the *UnStuffIt* program comes into play, and this is also where you are probably going to need some patience.

To download the file, you click on it. As ftp gets ready to transfer the file, you have to give it some directions. Because you want to read the file in something that looks like English, the file has to be in TEXT format. Some FTP programs have an option called "automatic" which means it will download the file in such a way that your computer will be able to read it. I have learned not to trust the "automatic" function, for it does not always work. (Remember, ftp is a first-generation navprog,

so it is clunky!) Because people can access these files from all types of computers with all types of word-processing programs—and you **know** how compatible all these competing technologies are—the files have been set up in formats that are more-or-less readable by all types of computers. That means that many of the files are already in ASCII or TEXT format. If you do not download the file correctly, you will get garbage that looks something like this: @#%‡∑♥♠ μθρδ5ϖ♣— or worse. When I get ftp garbage, I return to the original prompt and try a second time, making certain that I save things in text format.

In any event, your computer has to have the correct decoding program in order to read the file you have downloaded. Fortunately, *UnStuffIt* contains many of those programs, so that's why you need it. As a beginner at all this, look for files that have a **.txt** suffix. The **.txt** suffix means that the file is written in ASCII, a universal code that your word processor can understand. In the lesson that follows, you are going to be seeking interesting but gettable **.txt** files only. When you get more confidence, you'll be able to use the other file formats out there that include **.z**, **.gzip**, **.tar**, and others. To satisfy your curiosity about these other kinds of files, I recommend that you take a look at the *Way of the Ferret* (revised edition), by Judi Harris (she also talks about *StuffIt* and *UnStuffIt*), or *Education on the Internet*, by Jill Ellsworth. Download the set of ftp files called "Roadmap," and you can learn even more about ftp'ing. (See below for more about "Roadmap.")

FTP = Fairy Tales, Please!

Now you're ready to ftp some fairy tales for use in class. Open the ftp connection. When you see the dialogue-box prompt, fill in the blanks as follows:

Address:	**ftp.std.com**
User ID:	**anonymous**
Directory:	**/obi/**
Click on:	**OK**
Double-click on:	**Fairy.Tales**
Double-click on:	**Beauty and the Beast**

If your computer will not get confused, you can take the swift approach, as follows:

Address:	**ftp.std.com**
User ID:	**anonymous**

Directory: /obi/Fairy.Tales/Beauty and the Beast/

Click on: OK

Sorry, PC users, but your screens will look different from what I am about to describe. The principles and theory are essentially the same, but the look and the moves are different. Fiddle with it! For Mac users, the little MacDog in *Fetch* will start to run and then will stop when the file has been located. To download the file, you next click on TEXT to insure that the file will be in a text format so your word processor can read it. Then click on GET to download the *Beauty* file to your computer. When the window opens, asking you where you want the file stored, answer the question by typing in directions either to your hard drive or to a diskette. N.B.: If you download a lot of ftp files, you will use a lot of space, so you may want to use diskettes instead of cluttering up your hard drive.

While the fairy tale is being downloaded by *Fetch*, your MacCursor becomes a little running dog again. The MacDog will stop running when the downloading is complete. Because this is a text file, you can then find it where it is stored and read it directly from your word processing program. By the way, if you have a 2400 bps modem, you will wait longer for the download to finish than if you have a 14,400 bps or better modem. The bigger the baud rate of the modem, the faster the download. The whole process for a short fairy tale like *Beauty and the Beast* should take about 15 minutes.

While you are at this site, you will note that there are other fairy tales. Download them using the same procedure. Once you have the files on your computer, you can change the fonts, print size, leave words out, block and move, and all the other maneuvers of word processing to meet your needs. Here's a sample lesson plan for fairy tales that are downloadable via ftp:

Roadmap

Let's say that you have downloaded a file, and now you want to read it. You click on the file, but your computer gives you a message like "Not Readable" or "File Not Unstuffed" or something else equally obscure and unhelpful. Do not despair! This is where *UnStuffIt* comes into play. Open that program on your hard drive, read "Help," and then follow the directions for unstuffing a compressed file. You might also check out the books by Harris and Ellsworth, mentioned above, who offer useful advice on these mechanics.

There is, moreover, another way. Since you have already downloaded a couple of files, check out the *Roadmap* lessons that are available on Anonymous FTP, and learn how to use your e-mail program to retrieve ftp files. This alternative way to downloading ftp files works fine, but it might take as much as a day for the files you are

retrieving to appear in your e-mail account. When you read FAQs (frequently asked questions) in your e-mail documentation, you will find a list of commands, one of which is "GET." When you send an e-mail message with the "GET" command, you are asking your server to find another server out there, retrieve what it has to offer, and bring it home to you by e-mail.

Now, using your ordinary e-mail account, try the same "Get" command to acquire a very good set of beginner lessons about the Internet. The lessons are part of a series called "Roadmap," developed by Paul Douglas Crispen at the University of Alabama. The last time he "ran" the lessons was in the early part of 1995, and he said then that he would not be running them again. They might, therefore, not be up-to-date as far as specific Internet addresses are concerned, for these change all the time; however, "Roadmap's" lessons are quite informative on the subject of how to use the Internet effectively and efficiently.

"Roadmap" is located on a computer at the University of Alabama named UA1VM.UA.EDU. (Their Web address is **http://admin.media.ua.edu**) To access the Internet lesson of "Roadmap," send them an e-mail message that looks something like this:

To:	listserv@UA1VM.UA.EDU
Subject:	(blank)
Message:	GET *<file name>* *<file type>* F=MAIL

In the body of the message, use the "GET" command to ask the computer to retrieve some files for you. Listed below are the names of the files for the 27 lessons at this site. Type the "file name" of the file you want in after GET, and follow that with the "file type" of the file you want. Do not type in the "description of the file."

file name	file type	description of file
MAP01	LESSON	WELCOME
MAP02	LESSON	LISTSERV FILE SERVER COMMANDS
MAP03	LESSON	LEVELS OF Internet CONNECTIVITY
MAP04	LESSON	E-MAIL
MAP05	LESSON	LISTSERVS
MAP06	LESSON	OTHER MAIL SERVERS
MAP07	LESSON	NETIQUETTE
MAP08	LESSON	USENET
MAP09	LESSON	SPAMMING AND URBAN LEGENDS

MAP10	LESSON	Internet SECURITY
MAP11	LESSON	TELNET (PART ONE)
MAP12	LESSON	TELNET (PART TWO)
MAP13	LESSON	FTP (PART ONE)
MAP14	LESSON	FTP (PART TWO)
MAP15	LESSON	FTPMAIL
MAP16	LESSON	FTP FILE COMPRESSION POP QUIZ
MAP17	LESSON	ARCHIE
MAP17B	LESSON	FTP SITES POP QUIZ ANSWERS
MAP18	LESSON	GOPHER (PART ONE)
MAP19	LESSON	GOPHER (PART TWO)
MAP20	LESSON	BOOKMARKS AND BOOKLISTS
MAP21	LESSON	VERONICA
MAP22	LESSON	GOPHERMAIL
MAP23	LESSON	WWW (PART ONE)
MAP24	LESSON	WWW (PART TWO) POP QUIZ
MAP25	LESSON	ADDRESSES SEARCHES AND FINGER
MAP		EXTRA NEAT STUFF TO CHECK OUT
MAP		EXTRAADVERTISING ON THE Internet
MAP26	LESSON	IRC/MUDs/MOOs AND OTHER "TALKERS" GUEST LECTURE — RICHARD SMITH POP QUIZ ANSWERS
MAP27	LESSON	THE FUTURE

As you read through the list of lessons, you see that lessons 13-16 and 17B have something to do with FTP. To get these lessons, you need to send an e-mail message for each lesson that you want to the listserv, like this:

Message: Get Map13lesson F=MAIL

Message: Get Map14lesson F=MAIL

Message: Get Map 15lesson F=MAIL

Message: Get Map 16lesson F=MAIL

Message: Get Map 17B lesson F=MAIL

One lesson/one message is a little slow, and you can speed up the process by typing: MGET (that stands for "get many") and then listing all the files you want in a single e-mail message, like this:

Message: MGET Map13 lesson MAP14 lesson MAP15 lesson F=MAIL

The other shortcut is to order the whole package at once. Send this e-mail message:

To: **listserv@UA1VM.ua.edu**

Subject: blank

Message: Get Map Package F=MAIL

Each of the lessons, extras, and quizzes will be sent to you by return e-mail. Certainly, you will want to file these for future reference, but as well you may want to use these lessons as learning resources with your class, depending on their age, cyber sophistication, and interest. As you read down the list, you see that the lessons cover many of the main Internet topics addressed in this book—from Archie to WWW—and they are quite comprehensive, easy to understand, and easy to use.

You now know how to retrieve ftp information two different ways: by a direct download and by e-mail. There is still more to know about ftp, such as Archie searches and how to decode the various file types, but this is enough for now. Go get some practice and get good at getting and ftp'ing, and then you'll be ready to try some of the fancier stuff.

If you find yourself getting confused by ftp, do what I do! Whenever I find myself baffled by anything having to do with the Internet, I just ask my class. There's usually some technologically superior computer sophisticate out there who knows more than I do about what I'm talking about. I have not yet taught a class that did not have at least one kid in it who was far more capable of dealing with the vagaries of the Net than I am. I'm thankful for that! Let's not be hesitant to ask our kids for help. What better way could there be to model a vital spirit of collaboration, of learning together, of helping one another, than for the teacher herself to accept the assistance of her youthful computer consultants?

IN YOUR CLASSROOM:

Electronic fairy land

Goal

To have a better understanding of fairy tales and the ways that they reflect human behavior.

Rationale

Fairy tales usually have a moral or main point that can be applied to everyday living situations. By examining fairy tales, students learn something about themselves and others and life.

Objectives

Here are several objectives that make sense in several kinds of fairy-tale lessons:

- Read fairy tales that are related in some way to each other.

See the collection of Cinderella tales through the centuries that would work well here at this URL:

http://www.usm.edu/usmhburg/lib_arts/ english/cinderella /inventory.html

You already know how to use a browser, so this will be an easy lesson to get going.

- Compare traditional and modern fairy tales on the same, or a similar, theme.
- Compare two versions of the same fairy tale to show similarities and differences.
- Illustrate one or more of the fairy tales using whatever arts and crafts your students most enjoy.

Procedure for comparing two versions of the same fairy tale

Set the stage by showing the Walt Disney version of *Beauty and the Beast* and reading another version of *Beauty*. Have your students brainstorm the similarities and differences between the two versions of the fairy tale. Tabulate the differences by making up a Venn diagram, showing points of similarity (intersection) and dissimilarity. After going through the process with *Beauty*, have your students ftp their way to the fairy-tales source, select their own, download them, and then work in small groups on fairy tales that have been written at different times or in differing cultures.

Evaluation

Have each small group present a Venn diagram to the class, showing the unique features of two fairy tales, points of intersection, and points of difference. If some of your students have revised one of the fairy tales, invite them to read or tell it to the

class. If any of your students have studied the culture and time that generated one of the fairy tales that your class is reading, invite them to tell about what they have found out. This "value-added" approach to the study of literature is proof in itself of good work and good thinking done.

Engage your class in a discussion of fairy tales as reflecting the the time and the culture of the people who produced them, and then push the discussion further by asking what changes would be required in this or that fairy tale for it to be reflective of your students' time and culture.

FTP sites for fairy tales

Address: **ftp.funet.fi**

User ID: **anonymous**

Directory: **/pub/docs/Literary/etext/fairy-tale**

Choose: the fairy tales of your choice

This FTP site is in Finland—the Finns are wild about folk and fairy tales—and it also has many complete-text stories. For example, you can find *Anne of Green Gables*, *The Call of the Wild*, *A Christmas Carol*, some of Mark Twain's writing, *Dracula*, and many others. *Jabberwocky* is there too.

Or try this shortened version of the longer address discussed above:

Address: **ftp.uu.net**

Directory: **/doc/literary/obi/Fairy.Tales/**

Click on: the fairy tale of your choice and download it as a TEXT file.

CHAPTER 8

A BOOK AN HOUR

Teaching strategies take on a whole new life when adapted for use with the Internet. With this chapter, you and your students can practice using ftp and Gopher while reading a book in an hour. "A Book an Hour" is an excellent and speedy way to introduce or read a whole book, even a literary classic, with middle- and high-school students.

The pre-hi-tech approach with this strategy has been the following:

- Divide a book into chapters or segments so that small groups of students can read the parts and collaborate in preparing summaries.
- Near the end of the class period, a spokesperson for each group, beginning with the group that has read the first segment of the book, tells that group's summary, and so on until the whole story had been told to the class.
- As the summaries are read, develop a master chart either on the board or an overhead transparency to map out the story according to the summaries.
- At the end, the whole class works on a summary of summaries based on the summaries of the several parts.

Together, your class will have read, reported, and summarized a whole literary classic in a single period, if the book is not too long. When I've used this approach, I've found that I needed a minimum of two class periods for the strategy to work best, and I also need more time when I use the strategy with a class for the first time. Although this approach does not allow for a close reading of the text, it is a quick and easy way to introduce good literature to your students. They will get the idea that

"good literature" can also be interesting and need not be tedious in the reading. This hors-d'oeuvres approach will whet their appetites for more reading on their own.

IN YOUR CLASSROOM:

An online book an hour

An electronic version of "a book an hour" might go something like this: Instead of dividing up hard copy into chapters or segments, your students search out, ftp, download and divvy up, and read an electronic copy of their respective parts. If the book is not too long and is accessible by Gopher, students can read their pieces directly from the Internet, but I don't recommend that: No point in tying up the connection that long. More logical and less expensive, I suggest downloading the book onto a hard drive or diskette, converting it to the class word-processing package, dividing the text into segments with *block-and-copy* moves, and then have your students read their segments on their computers. This way, fewer paper books will have to die, torn asunder; every student gets to read his or her own copy; and, at the end, a *saved* back-up copy of the whole book becomes the readable property of every student, the first volume in their electronic library.

While your students are reading their parts of the book on their computer screens, they can be taking notes, whether by using the *comment-box* mechanism or merely by opening up space between lines. Recording their thoughts instantly and easily, they can build their summaries as they read. Printed paper books, even with the widest of margins, do not allow for this extent of editorializing as one reads.

Using the *block-and-move* function and the split-screen, your students can assemble their electronic notes into a draft of a summary, rewrite and reformat it with word-processing ease, and then swap disks. Each member of the group can read the draft-summaries of all the other members, typing out comments in shared-journal fashion. Then, when they meet in their groups to talk over the details and polish a final summary of that group's segment, they will have the benefit of already having read one another's individual comments and summaries.

Goal

Your students will become familiar with a classic work of literature by reading, commenting, summarizing, and crafting a summary of summaries of the selection, in one or two class periods.

Rationale

Because it is sometimes difficult to generate interest in "the dead poets" and other dead authors whose literary legacy is, nevertheless, a major part of the culture of our society and the light of our aesthetic life, an electronic upgrade of their works makes them lively and readable at the speed of light. When our students become familiar with these fine and enjoyable works of literary art in a meaningful yet "painless" way—and at the warp-speed of a video game—then fewer of them will register the universal complaint: "This is boring!" They will be encouraged to read other classics on their own.

Objectives

Download a work of classic literature using Gopher, FTP, or a Web browser. Work in small groups to read, comment, and summarize a segment of the book. Each group member reads the others' individual summaries; they discuss and prepare a common summary of their segment. The whole class works out a summary of the summaries. The whole class collaborates in reading the whole piece of good literature, and they work together to achieve understanding.

Optional Objective: Publish a Class *Illustrated Classic Comics*

Students draw (either freehand or using a computer draw program) pictures for each summary. Make a notebook of the pictures, each picture to be accompanied by its respective summary, with the summary of summaries to complete the project. Your students can then read the written and pictorial accounts of the work of their own crafting.

IN YOUR CLASSROOM:

Electronic Comp. Lit.

After several books have been read using these electronic strategies, students can compare and discuss the various works of classic literature in relation to each other.

Procedures

To generate enthusiasm, you need to stage the first event well. If you hook up with a smooth Internet connection and high-interest electronic books the first time you use the strategy, then you will be off to a good start. If you are studying the Romantic Period, for example, you will definitely want your students to read the works of Edgar Allan Poe. Show your class that you have only a few copies (one copy?) of the book, but through the wonders of electronics, everyone is going to read chapters of this book and make their own contributions to the significance of the story. At this point, you and they gopher to Poe (you will already have

located the site because you want this lesson to go rapidly), and your students take it from there.

On Gopher, type **gopher.std.com**. Double-click on **On Line Books Initiative, OBI** and **Edgar Allan Poe**. Select the Poe title you want. Because Poe's texts tend to be organized in chapters, it will be easy for your students to divide the book into parts. Have your students download the book and divide the chapters onto diskettes for reading and annotating. If you have plenty of computers, your students can work alone or in pairs. If you have more students than you have computers, then each group of three or four students can cluster around a computer. Let one student act as electronic scribe, seated at the keyboard, while the others in the group read the screen and offer comments.

As a regular routine in English or Language Arts class, this strategy can be used about once every other week quite effectively. Students enjoy it and look forward to doing it again and again. You may assign your students to do the surfing to find next week's book.

Evaluation

The various possible versions of this activity are easy to evaluate: Did the chapter/segment summary-writing work? Did your students take hold of their parts of the book and inwardly digest them? Did the summary of summaries work—is it logical and accurate? Is there a notebook of summaries and the summary of summaries? How does the homegrown "Illustrated Comic Classic" look? Above all, did your students engage wholeheartedly in the discussion of the book? If you can answer yes to these questions, you and your students did a good job.

Many sources for classic literature are available on the Internet. In the box, you see a list of a few of them from both GopherSpace and the Web. In the *Internet Yellow Pages*, you will see many more listings for "Literature" using ftp. Use the search engines to generate your own list: Search under "Literature," the names of your favorite authors, or even topics. The addresses do work, but oftentimes, if you have not subscribed to the service, you cannot download the documents. For this reason, you will want to have crawled around in GopherSpace yourself, and surfed the WWW in search of free, downloadable literature, or be ready to pay.

Especially the first time you try this strategy, you want to make sure that your goal is attainable. By assigning the Internet search-work to your students for next time, they will learn how to find electronic literature for themselves. **gopher.std.com** has many titles that are easy to access. In fact, if the chapter or section is too long, your Gopher program will ask you where you want the chapter saved. This is when I put things on a diskette. Downloading information takes a lot of room on a hard drive.

Whole Books on the Internet

Gopher to *Software Tool and Die*

Address: **gopher.std.com**

Choose: **OBI The Online Book Initiative/The Online Books**

Select: **The Online Books/**

Go for: **Any folder that looks interesting**

The list of authors and categories at this one site extends to over 150 entries. There are books by G. Chaucer and E. Brontë, by Edgar Allan Poe and Sir Arthur Conan Doyle, from Anglo-Saxon literature to Samuel Clemens, etc., etc., etc. There are other things here, too: weather maps, speeches by President Clinton, and *Star Trek* stories. You will be surprised at all there is to read at this one location. With this one site, you will never lack for literature.

The Bard on the Internet

The works of William Shakespeare are read by most 10th, 11th, and 12th grade classes. The full text of Shakespeare's plays, poems, and sonnets can be downloaded from the University of Minnesota gopher. The collection is arranged by category: comedy, history, poetry, tragedy, etc.

Address: **spinaltap.micro.umn.edu**

Choose: **Gutenberg/Complete Works of Shakespeare**

Don't stop at Shakespeare! This Gutenberg file contains lots more. A brief listing of some of the books found at this location include these: *The Scarlet Letter*, *Peter Pan*, *Alice in Wonderland*, *Through the Looking-Glass*, *Moby Dick*, *Song of Hiawatha*, *The Strange Case of Dr. Jekyll and Mr. Hyde*, and many others. In chapter 4, I recommend **http://med-amsa.bu.edu/Gutenberg/Welcome.html**—the Gutenberg mirror site. Either way is a good way to get there. **http://jg.cso.uiuc.edu/pg/welcome.html** is a mirror site for Shakespeare, too, also mentioned in chapter 4.

Women online

If your class is interested in women and literature, you can find the works of Louisa May Alcott, Jane Austen, Emily Brontë, and Sylvia Plath, among others, online at the following URL on the WWW:

http://sunsite.unc.edu/cheryb/women/wlit.html

This is a "slow site": Sunsites are good, comprehensive, and popular addresses, and—as a result—slow, sometimes.

FTP sources for online books

Three good locations I have found for FTP'ing books on the Internet are below. All of these sites are restricted access, which means that if you do not subscribe to the service, you cannot download the material. Up until now, most of the Internet has been for free; increasingly, however, people are finding ways to use the Internet commercially—subscriptions, access rights, for-credit courses, outright sales, and advertising is now popping up in all kinds of unlikely spots. People have a right to make a living by what they do! If your class can afford to pay the asking price, then go for it; if not, there's still plenty on the Web that is free for the searching.

(1) Address:**ftp.funet.fi**

Directory: **/pub/doc/literary/etext**

(2) Address:**ftp.std.com**

Directory: **/obi/**the title or author you want

(3) Address:**ftp.uu.net**

Directory: **/doc/library/obi**

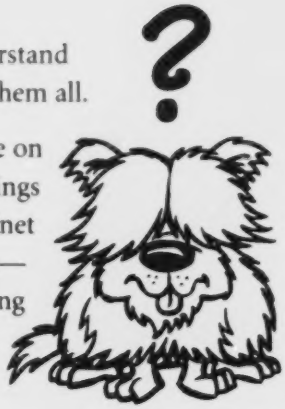
Choose: the title or author you want

Download to your heart's content! Most of it is all still free for the taking—it's like being given an unlimited gift certificate to your favorite bookstore. You will need to establish a storage policy for your class because those hard drives will fill up in no time. If your system includes a spacious server, and every user has a "student locker" in which to save downloaded files, then you are lucky. If not, it's every kid with a floppy for him- or herself. "A Book An Hour," with your own adaptations thereof, is a favorite strategy among Whole Language teachers, English teachers of any kind, any teachers who like to teach by using literature (whether whole or in parts), and plugged-in, turned-on book lovers. As a library that never closes, does not require you to return the books, and levies no fines, the Internet is the greatest! Right, Browser?

CHAPTER 9

TELNET, ANYONE?

I do not understand how telnet works, but then I do not understand how any of these other programs work, either, though I gladly use them all.



Telnet is one of the five navprogs (navigation programs) I have on my computer. When I tried to discover more about telnet, I read things like this: "Telnet is the access point for Gopher or Netscape," or "Telnet allows Internet users to connect with and use a computer anywhere—in the next room or halfway around the world—as if they were sitting at its keyboard." (Giangocavo, *Educator's Internet Companion*, p. 232) So I ask: If I have a program for Gopher or Netscape or Fetch, why do I need telnet?

The answer is an historical one: Telnet is a "first-generation" navprog—they invented it before they invented Netscape, and it's still around, like Gopher and some others. On the other hand, telnet is still the only way to access a few sites on the Net; telnet allows you to pinpoint a search with greater precision than does any other navprog; when—for any reason—you cannot make use of a browser, Gopher, ftp, or e-mail, old-reliable telnet will get you there. Telnet is as useful as ever.

Telnet allows you to use your keyboard to ask questions and target your search to specific information in a way that none of the other navprogs do. Telnet allows your computer to access other computers, that is, you can use your computer as a terminal through which to gain access to other computers that contain the information you want. Telnet lets you use your keyboard to talk to a remote computer, and your monitor serves as a window into the contents of that other computer. With telnet, you cannot actually get inside that other computer and do computing, but you

can gain front-door access, make requests, and get responses. (There are programs that allow you to get inside remote computers and do computing there, but that's a different story.)

When I cannot seem to gain access to the Net in any other way, I fall back on telnet. Because it is a basic, meat-and-potatoes navprog, slower than the other means of access, and not an entirely user-friendly way of getting out there and getting what is wanted, I tend to prefer e-mail, Gopher, browsers, even FTP—they are all a bit easier to use. When you need telnet, though, it's good to know how to use it.

Telnet transforms your computer into a front-end terminal that works off of a remote computer, much in the way that the computer at an ATM (bank machine) works off of the bigger, smarter computer inside the bank. Front-end computers tend to be dumber than the computers they work off of, and that will be the case with your computer: Your keyboard will work, but your mouse won't; and on your keyboard, the delete key will not work. Because telnet is letting your computer work with another computer, you may need a password or other means of access to get in.

As a result of this clunkiness, when I am using telnet I read all the prompts very carefully, type deliberately, and try to remember the magic words that enable me to make up for the lack of a delete key. That way, when I make a typo, I can rectify the problem. Even though I try to proofread all my typing and do not use the delete key and follow all the directions to correct my errors and think precisely and type perfectly, I nevertheless mess up every now and then. Steamed and caught in infinite loops of frustration, I remind myself to accept the limitations—no mouse, no delete key, and the rest—and then the aggravation level subsides somewhat. Some telnet systems are *so* clunky that you will see no prompts at all and receive no guidance for use on the screen. They expect you to *just know* what to do. If you're a beginner, shout after me: "Help, Techie, help!"

With all its limitations, telnet is, nonetheless, essentially easy to use. My students seem to outdo me in their mastery of telnet, and I gladly rely on their expertise when I get myself into trouble. If you teach your kids to use telnet, you will be teaching them keyboard precision. In telnet, they can never backspace, delete, or otherwise correct any typos that they make, so they must be precise in their typing. Telnet is winsome, but a little dull—takes everything you say literally. So if your students reverse letters or numbers, telnet will read what has been typed exactly as it has been keyed, mistakes and all. Telnet is faithful, but not forgiving. At that point, there's no help for it: Start over.

Telnetting

To use telnet to connect to the Internet, do the following:

1. With your mouse, click on the telnet icon to open the connection.
2. Wait for the beginning advertisement to clear from the screen, and then mouse your cursor to the dialogue box. (You are not yet in telnet, so you can still use your mouse.)
3. When the dialogue box appears, type **open** [Note lower-case letters!] and the address you want. For example: **open ds.internic.net**
4. A menu will be displayed that will tell you the login you must use to access the system, how to erase mistyped information, and how to exit the site. Read and remember this information! You will need it, later on.

You have now established a telnet connection, and you can use neither your mouse nor your delete key anymore. You must use the arrow keys and your keyboard to get where you want to go. Telnet has another quirk: Telnet is case sensitive. That means, if the login requests some curious combination of UPPER and lower CaSe letters, you must login with that precise combination of UPPER and lower CaSe letters. Telnet allows neither creativity nor disagreement at the keyboard. If you do not login as requested, you will not get to that address.

I've found that libraries are best accessed through telnet, and there are many libraries on the Net—indeed, electronic access to the world's Networked libraries is one of the astounding riches of the Internet. The Internet gives a whole new meaning to the phrase "go to the library!" For fully online libraries, you'll find an electronic "card" catalogue of books, articles, reprints, etc. Some libraries, however, are not fully on-line, and some have put only part of their collection online—say, the more recent titles. I use telnet for every library search I do. It is so much easier for me to sit at my computer and find what I need @ the library than to do the same thing in the library. Besides, I'm a night person who tends to want to do library searches at midnight, and most libraries are not open at that time of the night. To borrow an ad from the Yellow Pages company: "Let your fingers do the walking."

Archie

One of the best, most frequent uses of telnet is to do an Archie search. Just as you search Gopher with Veronica, and search the Web using Lycos, InfoSeek, WebCrawler, Yahoo (among others), so also you search ftp archives by using Archie. Get it? Archie = archives! To get to Archie sites, you need telnet.

Archie sites are busy, and each one is identical. You may have trouble getting in because so many people use Archie, but once you're in, you'll know what to do. It is best to use the Archie site geographically nearest to you. While I was writing this

book, as you know, I was in the mountains in Wyoming, so I used the nearest Archie site—Nebraska! Here is Browser's list of Archie sites around the world.

Archie sites around the world

Telnet address	location
archie.au	Australia
archie.edvz.uni-linz.ac.at	Austria
archie.univie.ac.at	Austria
archie.uqam.ca	Canada
archie.cs.mcgill.ca	Canada
archie.funet.fi	Finland
archie.univ-rennes1.fr	France
archie.th-darmstadt.de	Germany
archie.ac.il	Israel
archie.unipi.it	Italy
archie.wide.ad.jp	Japan
archie.hana.nm.kr	Korea
archie.sogang.ac.kr	Korea
archie.uninett.no	Norway
archie.rediris.es	Spain
archie.luth.se	Sweden
archie.switch.ch	Switzerland
archie.ncu.edu.tw	Taiwan
archie.doc.ic.ac.uk	United Kingdom
archie.hensa.ac.uk	United Kingdom
archie.sura.net	USA (Maryland)
archie.unl.edu	USA (Nebraska)
archie.internic.net	USA (New Jersey)
archie.rutgers.edu	USA (New Jersey)
archie.ans.net	USA (New York)

Remarkably, the only Archie west of the Mississippi is in Nebraska, so if you live Out West, Nebraska Archie is the Archie nearest you.

Follow these steps, or Archie will not work! Follow these steps, and Archies everywhere will hearken to your call!

Open telnet

Host: **archie Nebraska** (Pick the Archie site nearest you; this is the one I used while writing this book.)

Login: **archie** (If you're lucky and the site is not busy, you'll get a screen that tells you that you are at Archie. If your local site is busy, you can try another one, but stay as close to home as possible.)

Prompt: (Type the key words that relate to the information that you want to get.) Here's the only tricky part: I was looking for fairy tales, so at the prompt: *unl-archie>*, I keyed in: **prog fairy tales** ("Prog?" Had I typed "fairy tales" only, Archie would have said, like, duh! In response to "fairy tales" only, Archie would have lied and said that there are zero FTP archives. Ya gotta talk his language.)

When you do not know the type of command to give Archie—not unlike the search commands of a library's online catalogue: a = author, k = keyword, t= title, and so forth—then you have to ask for them (Archie is shy). At the prompt, *unl-archie>* type the following: **help** and you will receive a complete list of commands. Print these out, for you will surely be needing them!

To continue: After entering your search request and pressing RETURN, a message will probably appear telling you where you are in the search queue, and telling you as well how long the search will take. (This latter, otherwise helpful piece of information, however, is not always accurate).

When I asked for "prog fairy tales," and waited, after a while, Archie returned a large number of citations, some of them looking something like the following:

```
Host ftp.std.com (192.74.137.5) Last updated 20:38 9
Apr 1994 Location: /obi DIRECTORY drwxrwxr-x 3072
bytes 12:26 19 Sep 1993 Fairy.Tales
```

This kind of response does not exactly instill confidence in the beginner. Remember, computer stuff is done by techies, who, while they can be lovely people, are more accustomed to speaking with machines than with human beings, so you have to be long-suffering with them and their products. They talk *ergonomics* and *user-*

friendly all the time; and, goodness knows, they need to, for the practice of anything remotely resembling those concepts has only just begun to dawn in the Nether gloom of the computer techie, illuminated only by the half-lit glow of a computer screen.

Let's make some sense of those strings of human-language non-sense:

Host ftp.std.com (192.74.137.5): This says that what I was looking for is at a host or server called **ftp.std.com**, which can be reached either by telnetting to that site or to its IP (Internet protocol) number of **192.74.137.5**. (By the way, all the Internet addresses that we have been talking about in this book have their alternative IP numbers. You can get to any site either by searching for the host address or by searching for the IP.)

Last updated 20:38 9 Apr 1994: This tells you when the archive was checked most recently and new information was added. Since I accessed this archive in July 1995, I see that my resource was now over a year old since anything had been done to it. Because it is a fairy-tale file, being up-to-date is not that important. If it were a news archive, on the other hand, it would be a bit stale. If timeliness matters, keep an eye on the "last dated" line.

Location: /obi: This directs you to go to the **/obi** directory at this ftp archive in order to access fairy tales. You're familiar with this code from chapter 7, on ftp.

DIRECTORY drwxrwxr-x 3072 bytes 12:26 19 Sep 1993 Fairy.Tales: This gobbledegook informs you that the fairy tales are in a **DIRECTORY**, as opposed to a file or something else. The string of letters that follows—**drwxrwxr-x**—tells whether the archive is a file or a subdirectory. Because this string of letters starts with **d**, you can know that it is a subdirectory; if it had it started with a hyphen (-), then you would know that it was a file. (This kind of information is Terribly Important, and techies everywhere breathe heavily when they read this.) The directory is **3,072 bytes** long (although computers break the math rule and don't insert commas every three numbers), and it was added to the archive during someone's lunch hour on September 19th, 1993. Lastly, the name of the directory is **Fairy.Tales**.

What you do by telnetting to Archie and engaging in this kind of search is essentially searching an online catalogue of archives, like searching a library's online book catalogue. Once you get your list of call numbers in the library, you then have to go to the stacks and pull the books you want. Once you get your list of sites from Archie, you then have to go ftp'ing to those sites to get the resources you want. If, for example, you worked your way through chapter 7, the ftp chapter, you may already have accessed some fairy tales at this very site. This is, indeed, one of Archie's limitations: You have to couple an Archie search with an ftp and download effort. Archie's a little lazy: He only tells you where the files are located, but he won't go get them for

you. When you search Gopher with Veronica, the files are listed and retrieved for you right there, right then. That's the way it works with a WWW search, too.

Much of this Archie information, so helpful to techies, you may simply ignore. All you need to know is how to ftp to where you want to go, and all you need for that in the information we are discussing is this:

Address: **ftp.std.com**

Choose: **/obi/**

Give yourself a little quiz: See if you can decode the essential information in the following Archie item. If you get it right, Browser will bark and wag his tail.[1]

```
Host ftp.uu.net (192.48.96.9) Last updated 10:01 23
Jan 1994 Location: /doc/literary/obi DIRECTORY drwxr-
wxr-x 512 bytes 23:00 13 Oct 1992 Fairy.Tales
```

A telnet date with CARL

One fabulous library system to visit is CARL (Colorado Alliance of Research Libraries). CARL is more than one library; it is a Network of libraries around the world. When I lived on Guam, where library access was difficult, CARL was there. CARL and I have been friends for years! CARL gives access to current magazine articles, databases, other university and library systems, the whole ERIC database, and UnCover which is a listing of journal and magazine articles and catalogues.

At many sites, CARL is free and open to the public; at some sites, CARL requires membership. (For example, some universities restrict use of CARL to faculty, staff, and students.) The means of gaining a CARL account, and the accompanying protocols, vary from server to server. At some sites, without an account, although you'll be able to browse through some areas without accumulating any charges, you won't be able to download what you find. At other CARL sites, of course, you'll be able to make off like a bandit. To telnet to CARL, do the following:

Open telnet

Host: **pac.carl.org**

Login: **pac**

[1] If you agree with the following, you are on your way to Archie mastery:
FTP to ftp.uu.net (or to the alternative IP 192.48.96.9)

Now, telnet asks: What type of terminal are you using? Many computers emulate a VT100 terminal, and that is option 5 on the telnet menu. If you are using a different kind of terminal, consult with your techie to find out how to answer telnet's question.

Terminal? Select: 5 (and press RETURN).

The next screen offers you a number of choices:

1. Library Catalogs (including Government Publications)
2. Current Article Indexes and Access (including UnCover and ERIC)
3. Information Databases (including Encyclopedia)
4. Other Library Systems
5. Library and System News

For this lesson, I suggest that we look for some Russian fairy tales, so, at the prompt, type 1 because you want to go to *Library Catalogs*, the most likely place to find books of Russian fairy tales.

It will ask you to enter the NUMBER of your choice and press return. Since I was in Wyoming, I chose the University of Wyoming Library and pressed return. After that, another screen appeared, narrowing the library search.

As I was in Wyoming when I did this search, I kept choosing Wyoming addresses. Then I pressed RETURN. Finally, I was at the card catalogue of the University of Wyoming, so I got another screen—a typical online library screen—asking whether I wanted to search by title, word, or browse. Now I felt at home, so I continued as I would have done—as we all do—had I been standing at the keyboard of any library's online catalogue.

I searched for "fairy tales," narrowed that search to "Russian," and came up with 14 entries. I paged through each of the 14, reading what the entries told me about the books, noting their locations in the library, and planning my next trip to Laramie to check out books. When I do actually go to the library in Laramie, I will have already done my searching in Etna, I will have my call numbers in hand, and I will know where to go in the collection to find Russian fairy tales. Back in Etna, when I am preparing my bibliography, and discover that I have forgotten to write down the publisher and year of some book or other, I shall again telnet from Etna to CARL at Laramie, on the other side of the Rocky Mountains, and save myself a considerable trip to the library.

Telnet for K-12

According to Jill Ellsworth, author of *Education on the Internet*, p. 19, **UMassK12** at the University of Massachusetts is one of the best-developed telnet sites for K-12 educators—and Jill knows her stuff. After opening the telnet connection and doing the login, as a first-time user you might have to register. Following that, you will see a wealth of information from which to choose. The site is also accessible by Gopher or a browser. I think you know how I would access the site!

Open telnet

Host:	**k12.ucs.umass.edu**
Login:	**guest** (use lowercase letters)
[or Gopher:	**k12.oit.umass.edu**]
[or WWW URL:	**http://k12.oit.umass.edu**]

After you login, you will get a screen welcoming you to UMASSK12, informing you about what you can access for free as a visitor (e.g., newsgroups), but instructing you that to do more, you need to become a "registered user." As of summer 1995, they were accepting account applications only from Massachusetts K-12 educators. Then they invite you to visit their Gopher and their home page—**gopher k12.oit.umass.edu** and **http://k12.oit.umass.edu** —also accessible by visitors only in part. In a rather unusual Internet display, they go on to explain other rules and regs and limits. This constrained approach reminds me of a time when I visited Massachusetts, and a flip teenager, when she found out that I was from a different State, said to me: "Welcome to Massachusetts; we can't do anything." If the folk at U Mass would get themselves a bigger box—a more powerful server (and they're not that expensive)—they could skip all of this, if they wanted to.

Even so, UMASSK12 is well worth a visit by the outsider. Their "guest menu" offers useful stuff, and you are welcome to plunder it within the prescribed limits. For example, under selection "8. Newsgroups," you can read Usenet, Fidonet, SpaceNet, K12Net, Kidlink, and others, and under "9. Local Resources," you can get to science experiments. One good one is on building a bridge; you can view online and then download it for use later. There are lots of possibilities at UMassK12, even for people from Wyoming.

Telnet to ERIC

ERIC's telnet connection is a mirror site to the other ERIC sites you can visit.

Open telnet

Host: ericir.syr.edu

Login: gopher

The WorldClassroom Network

Following Browser's how-to-get-there box, help yourself to a lesson using the WorldClassroom Network that I have pirated from the Global Learning Corporation. Note that Global Learning Corp. is a for-profit sponsor of the WorldClassroom Network, so there will be a charge for the service, but you can sign in for free as a guest to see if it is something you're willing to buy. I have found the WorldClassroom Network fascinating and helpful, and my students like it a lot.

Telnet to the WorldClassroom Network

Open telnet

Host: GLOBAL1.GLC.DALLAS.TX.US

Login: demo3 (use lowercase letters)

Password: WORLDCLASS (use uppercase letters)

If you have not logged in to WorldClassroom Network before, you will probably have to fill in a questionnaire stating who you are, your e-mail address, your snail-mail address, etc. It's painless.

When you get to the "WorldClassroom Guest Menu," you will be presented with all kinds of choices: an introduction, a typical session, equipment needed, a demonstration, among others. The listing of online conferences is amazing in its breadth:

wcr100_welcome	wcr110_teacher_ctr	wcr120_student_ctr	wcr130_keypal_reg
wcr140_user_database	wcr150_itu *	wcr160_help	wcr161_practice *
wcr210_stumpers	wcr220_eco_news	wcr225_greenhouse	wcr230_skynotes
wcr240_planets	wcr245_fly_a_kite	wcr250_labs *	wcr270_quake_data
wcr271_quake_arc	wcr275_eq_lessons *	wcr280_us_weather	wcr281_us_arc
wcr290_wrld_weather *	wcr291_wrld_arc *	wcr310_kids_eye	wcr320_in_the_news
wcr330_issues	wcr340_market	wcr350_almanac	wcr360_home
wcr370_trade_places	wcr380_liberty	wcr385_biopoem	wcr410_potpourri
wcr420_primary	wcr430_poetry	wcr440_first_place	wcr441_city wcr442_life
wcr450_fables *	wcr455_spooky	wcr460_rave_reviews	wcr465_heroes
wcr510_guests	wcr520_newslink	wcr530_celebrate	wcr540_multilingual
wcr541_amistad *	wcr560_lifetime *	wcr570_cnn_newsroom	wcr575_ascii_art

I have been a guest on WorldClassroom Network for many hours, and I find it irresistible. Lurk a while to see if it is a spot for you. Be sure to check out **wcr210_stumpers** (an open access site—no account required to participate). Stumpers are really hard riddles and games and logic puzzles. In 1994, it was frequented mostly by middle-school students. The kids raised questions about all sorts of things, including sun dials, latitude, longitude, eclipses of the sun. Peer- and cooperative learning was taking place by the ton. The interaction among the different kids was great to watch. As the kids participated in those conference sessions, I observed that as they became acquainted with one another, their responses became more personal. People who argue that computer communications are impersonal have not yet experienced the instant intimacy of online acquaintance.

IN YOUR CLASSROOM:

WorldClassroom Network Conferencing

Goal

To get a better understanding of the world by interacting with people from all over the world in science, social studies, and language arts.

Rationale

We live in a global community—more so now, since the Internet, than before. By learning how to work with people all over the world, we will be better prepared to meet the challenges of tomorrow: the challenges of cross-cultural communication, inter-cultural personal relations, and international business, not to mention world peace.

Objectives

Your students can subscribe to, and participate in, one of the conference sessions. About 35 different sessions take place each year.

Procedures

Introduce your students to the idea of talking with someone from a different city, state, or country, language and culture, about a common problem or situation. Ask them if they regularly talk to really different people—people from other places and races, people of different colors and cultures, people with different languages and values and customs. Prepare them, if necessary, to realize that people really are different from one another, just as surely as people really are similar.

Ask your students what they like to talk about, what they like to think about, what they are wondering about.

Introduce them to the computer link to the WorldClassroom Network where they can talk to kids just like themselves—and together they can try to solve problems, deal with a situation, and answer questions.

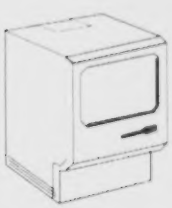
Evaluation

After your students have had a chance to work with the WorldClassroom Network for a while, they will notice that kids are pretty much the same everywhere. The other kids' English may not be perfect, but their meaning—most of the time—will be perfectly clear. Ask your students to report to your class on some of the problems they have been solving online. Honest discourse, clarification, and exploration of ideas while trying to solve a common problem is one of the end products of this exercise. Ask your students to keep the class posted from time to time on the progress and results of their online discussions.

Telnet resources

CENet

The Cornell Extension Network (CENet) has information about agriculture and the environment.



Host: **empire.cce.cornell.edu**

Login: **guest**

Exit command: **bye**

DCLOS

Dartmouth College Library Online System (DCLOS) has resources that include the CIA World Factbook, full text to 33 Shakespeare plays, an electronic dictionary, and if you are a member, all of Robert Frost's poems.

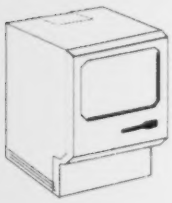
Host: **lib.dartmouth.edu**

Login: (No login was required when I did it.)

Exit command: **bye** or **quit**

Big Sky

Big Sky Telegraph in Dillon, Montana, offers educational resources and classroom teaching ideas ranging from lesson plans to science labs. You have to subscribe to the service, but you can login as a visitor to check it out.



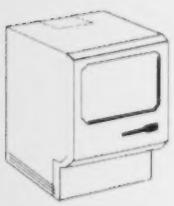
Host: **bigsky.bigsky.dillon.mt.us**

Login: **bbs** or **visitor**

Exit command: **bye**

CHAT

Conversational Hypertext Access Technology (CHAT) is a research program that allows you and a computer to have a conversation. You can ask questions about AIDS, epilepsy, and sex education, or you can carry on a conversation with Alice, a mythical girl; or with Maur, the dragon. (If you choose the dragon, be careful, he's mean and nasty, and he will burn you to a crisp if he does not like what you say.) CHAT is innovative stuff and an arresting experiment with Artificial Intelligence, something that you and your students alike will find fascinating. And you don't even have to spell very well for the computer to give you an intelligent response.



Host: **debra.dgbt.doc.ca 300**

Login: (No login was required when I did it.)

Exit command: **goodbye**

CHAPTER 10

SCAVENGER HUNT

Many ways to hunt

Scavenger hunts are almost always fun, except when they ask you to scavenge stuff that gets you into trouble! Scavenger hunting on the Internet, I am happy to report, is perfectly safe—no outraged neighbors, no police involvement, no embarrassing piece in the newspaper the next day. Scavenger hunts on the Internet are safe and good because everyone on the Net **wants** you to find them and **hopes** that you will scavenge what they have put up on their Webpages. One site on the Web, in fact, is even called *Scavenger Hunt*; however, most of the things you'd search for at that address would be too obscure for most kids.

Scavenger hunting on the Internet, my way, on the other hand, is kids using Veronica to search GopherSpace and the various other search engines, like a browser in Netscape, to find things related to their school subjects and their other interests. Because Archie sites are so busy, proper netiquette says that it should not be accessed "for the heck of it." So, while your students might need practice doing an Archie search in telnet to find FTP archives, I recommend doing a real search and not a simulation like this. This lesson is not difficult, and it teaches your students how to use the tools they need when doing searches on the Internet. After they become proficient at searching for fun, they can transfer use of these skills to find anything that interests them anywhere on the Net.

You can make this lesson be about any topic you like. If you are studying a subject in science or math, social studies or literature—or any other topic at all—all you have to do is devise a list of "things" that you want your students to find by using the various search engines available on the Internet: Veronica (for Gopher), InfoSeek,

Lycos, WebCrawler, or Yahoo for Netscape, or WAIS, or Archie. In this game, the one rule is that your students must use the appropriate search engine so they become efficient at searching in a controlled environment. Then, when they know how to do a search in any of the navprogs, they can do it on their own with ease.

From previous chapters, you have learned how to use Veronica in GopherSpace by looking for the files with **?** or **binoculars** on them, or by seeing a file description that actually says "Veronica Search" or "Search" or "WAIS"; and you have learned by now how to locate the major search engines such as InfoSeek, Lycos, WebCrawler and Yahoo in Netscape. Something you might want to think about is how these search engines got their whimsical names. In fact, that is one of the questions in the "scavenger hunt" below, so I won't tell you here.

When I polled my colleagues the other day, asking the difference between Archie and Veronica and WebCrawler, no one could tell me. The best answer I got was, "Why do I need to know the names of the different searches, anyway? I know what to do, and it works!" There's wisdom in that. I can't argue a case in favor of the importance of knowing all of these details about software or hardware or nomenclature, either. This technical stuff is of interest to techies, and they're welcome to it. What counts for me, whether she's called Veronica or he's called Archie or it's called Yahoo or Lycos, and whether they are gophers, browsers, or some other beast, is whether or not I can click-and-point and get what I'm after in a relatively short time, so as not to run up the phone bill or keep the server busy any longer than necessary.

I use examples from different content areas because I have a smorgasbord mind and I think it's fun—that's what a scavenger hunt is all about, after all, having fun while looking for a wildly assorted list of odds and ends. If you want to structure a scavenger hunt for your class and keep it focused on the subject that you teach, that will be OK. In fact, kids seem to do better on the Internet when there is a focus on the lesson, as opposed to free time on the Net. Free time on the Net, however, is a sure cure for a class that is threatening to go ballistic—they wander off in Webspace and bliss out.

IN YOUR CLASSROOM:
Scavenger Hunt

Goal

Your students will learn how to search GopherSpace and the WWW using Veronica and the search engines available in Netscape. They will have a chance to display their existing knowledge about something, try to prove it, and, finally, find out the

answer, and either correct their erroneous response or justify their correct response through documentation.

Rationale

Learning how to search the Internet is fast becoming an essential skill in our information-driven culture. This exercise in search strategies is basic training in problem-solving skills that can be transferred to other media resources such as the yellow pages, the encyclopedia, or library catalogues, and that your students will use over and over again throughout the rest of their academic careers and into their work lives.

Secondly, questions in the anticipation guide lead your students into thinking about what they already know so that they can apply the skill of activation of prior knowledge in future learning environments.

Lastly, learning both to do and to accept error correction graciously concerning matters of precise fact is an inter- and intrapersonal skill little talked about by educators, and yet precision in objective knowledge, correct "spelling" of complicated URLs, and accurate data retrieval is of the essence when working with computers, knowledge bases, and the Internet.

Objectives

Successfully complete several Veronica, InfoSeek, Lycos, WebCrawler, and/or Yahoo searches. Write initial responses to questions to activate prior knowledge. Write documented responses to the same questions after completing the searches.

Procedures

Set the stage by telling your students that they are going on a scavenger hunt. This hunt, however, will be a virtual hunt conducted in the ether, using the search engines in GopherSpace and Netscape to answer the series of questions in the anticipation guide. Show your students how to use each of the search engines. Show them how to do simple searches and more complex boolean searches, using words such as "and" and "or." Advise your students to work in groups of two or three—three heads are better than none. Give the same set of questions to each group, so that the hunt becomes a contest; or, to make it more challenging (both for you and for them), make up different sets of questions for each group. If this is the first time they have used a search engine, I would limit it to one navprog only because your students may need a bit of time to explore the capabilities of the Internet. Instruct your students to bookmark the Gopher addresses they find so that they can defend their agreements or disagreements, should anyone question their answers. The entire process might take a couple of days. The scavenger hunt below is not a beginner's lesson, but a composite of some things you can do.

Evaluation

At the end of the scavenger hunt, your students will have learned how to use the various search engines. They should have a set of correct responses to the items in the anticipation guide. Make the exam for this lesson a further challenge: Have the teams swap written statements of documentation of their sources, and assign the teams to test the other teams' search strategies by duplicating them, proof-read the other teams' writing of Internet addresses, and prove or disprove the other teams' results.

As with any exercise in this book, you can modify this lesson, making it harder or easier, depending on the readiness, needs, and abilities of your class. Kids from about third grade through high school ought to be able to handle and enjoy this lesson. I hope I managed to stump at least a few of your whiz kids!

Anticipation Guide

Start with an anticipation guide, I suggest, to focus your students' thinking. The anticipation guide is a way to evoke agreement or disagreement from your students on a variety of questions or statements. Five is a good number to start with and it does not tie up too much phone time. You write five questions or statements, and your students write whether they agree or disagree with the questions/statements, and then they go to their nearest required search engine and try to back up their responses. They do this by searching until they find confirmation or disconfirmation of their responses. At the end of the lesson, your students compare their original responses to the five questions or statements with what they have found by Netsearching, and discuss what they got right or wrong and why.

Before you announce the list for the scavenger hunt, you will want to give your students direct instruction about how to use a search engine in Gopher and a browser. These are all explained in previous lessons. Also, as a refresher, read about search engines in the *Roadmap* classes you had e-mailed to you when you were working with chapter 7. Browser has an inquiring mind; here are the five questions he wants to know:

Anticipation Guide

Do you agree or disagree with the following statements? State why you agree or disagree, and be prepared to back up your answers with references to resources on the Internet.

1. Walt Disney wrote *Alice in Wonderland*. Agree or Disagree? Proof? (Use Veronica to find this answer.)
2. *White Fang* was written by the same author who wrote *The Grapes of Wrath*. Agree or Disagree? Proof? (Use Veronica.)
3. The atomic number for chlorine on the Periodic Table of Elements is 17. Agree or Disagree? Proof? (Use either Veronica or a browser.)
4. The latitude and longitude of the capital of Rhode Island is 42N, 13W. Agree or Disagree? Proof? (Use a browser.)
5. The Iditarod dog-sled race is run between Fairbanks and Nome in Alaska. Agree or Disagree? Proof? (Use a browser.)

Here are three alternative questions to choose from, if you happen not to like all of the above:

6. In the lingo of computer technology, a gopher is more like a ferret than it is like a squirrel, although they are all rodents and they all live in holes. Agree or Disagree? Proof?
7. "Veronica" is an acronym. It stands for "Very Elusive Reasons Of No Information Capacity Available." Agree or Disagree? Proof?
8. "Archie" is short for a man's first name, Archibald Clinker, who invented the Archie search engine. Agree or Disagree? Proof?

Cheat sheet with Browser's answers

1. Disagree. Lewis Carroll wrote *Alice*. Any library-based gopher will do to find this information; I chose the University of Maryland.

Gopher: **gopher.inform.umd.edu**

Choose: *Libraries*

Click on: *? Minitex Veronica Searches*

Type: **Alice in Wonderland**

2. Disagree. *White Fang* was written by Jack London, whereas John Steinbeck wrote *The Grapes of Wrath*. For this two-part search, your students will have to look for the name of the author of both novels to find the whole answer. Gopher to any library. I chose the Gopher at Indiana University this time.

Gopher: **gopher.lib.indiana.edu**

Choose: *Libraries*

Choose: *? Minitex Veronica Searches*

Type: **White Fang**

Repeat the procedure with *Grapes*.

3. Agree. To find the atomic number of any element, you can either Gopher it or Netsearch it:

Gopher: **gopher:** pick a site, any site!

Choose: *? Reference Works*

Choose: *Periodic Table of Elements*

Choose: *Chlorine*

In Netscape, using WebCrawler, and searching for "Periodic Table of Elements," you'll probably find it at this URL:

http://www-c8.lanl.gov/infosys/html/periodic/periodic-main.html

—which will lead you to this correct link:

http://www-c8.lanl.gov/infosys/html/periodic/17.html

4. Disagree. The capital of Rhode Island is Providence, and it lies at 41 degrees N latitude and 71 degrees W longitude. Proof?

Gopher:	**gopher:** any one will do.
Choose:	*? Reference Works*
Choose:	*U.S. Geographical Names Database*
Type:	**Providence, RI**

The Netscape approach to this question is harder. Use Yahoo because this search engine has categories already devised.

Netscape:	Yahoo
Choose:	*Regional information*
Select:	*Geography*
Click on:	*Geographic Name Server/Xerox Map Gateway* You'll get **http://wings.buffalo.edu/geogw** which links to a searchable index.
Type in:	**Providence, Rhode Island**

Read around until you find the info you want.

5. Disagree. The Iditarod is run between Anchorage and Nome. This one is trickier: You can use any Gopher, but because you're asking about something in Alaska, why not ask in Alaska?

Gopher:	**info.alaska.edu**
Choose:	*Other Gopher and Information Sources*
Select:	*Alaska*
Click on:	*Sports and Recreation*

In Netscape, I used WebCrawler and typed in **Iditarod**. I chose the *Iditarod Home Page*, and from there I linked to

http://www.alaska.net/~Iditarod/IditarodBack.html

—where I copied this as my proof:

The 1995 Southern Route — "The Last Great Race" Anchorage, Eagle River, Wasilla, Knik, Yentna, Skwentna, Finger Lake, Rainy Pass, Rohn, Nikolal (over Farewell Burn), McGrath, Takoma, Ophir, Iditarod, Shageluk, Anvik, Grayling, Eagle Island, Kaltag, Unalakleet, Shatoolik, Koyuk, Elim, Golovin, White Mountain, Safety, Nome.

The race starts in Anchorage and ends in Nome.

You don't have to do a fancy search to find the answers to the three alternatives:

6. Read about the natural history of gophers in the "Help" screen in Gopher. You can't miss it.

7. *Veronica* stands for Very Easy Rodent-Oriented Net-Wide Index to Computerized Archives. See chapter 6.

8. Archie is short for Archive. See chapter 9.

Scavenger hunts are a hoot. Keep them short and simple, and your students will learn a lot, gladly and fast. The problem with this lesson is that your students are required to search for narrow responses to narrow questions. Not exactly the top of the hierarchy of Bloom's taxonomy! Precise knowledge, nonetheless, and the mind's ability to deal with it precisely, are the foundations of higher-order thinking. You can't have a brick wall without a lot of bricks in the wall, plumbed, aligned, and squared (unless you're going for a quirky effect); and a brick wall that is little more than a pile of bricks is weak and dangerous. With this simple exercise under their belts, your students are now ready for the complexities of a more difficult search, such as the one in chapter 15.

CHAPTER 11

THE ABCs OF THE INTERNET

A is for Archie, B is for Browser, C is for Computer.... Alphabet books are among the first texts that little people read, yet they are developed by big people. The idea behind *this* lesson is for older kids to use the Internet to make an alphabet book for younger kids, and not one based on computer jargon, either.

The topic can be about just anything, so long as it's broad enough to offer words aplenty to use up the alphabet. An easy ABC book would be on animals. The older kids would already be inclined to start with Aardvark and end with Zebra. The challenge to them would be finding information about these critters on the Web. Once they had finished their work, you could arrange for a cross-grade peer collaboration between, say, your 5th-graders and the 3rd-graders down the hall. Sit a couple of older kids and a couple of younger kids in front of the same computer, and let the older kids show the younger kids their bestiary abecedarium, and then let older kids and younger kids surf the Web together in search of a zoo-full of more animals. The 5th-graders could teach the 3rd-graders how to browse, and the 3rd-graders could demonstrate that they already know how to do that, and more. In Browser's box are a few suggestions to get a quick study started on animals in alphabetical order.

WebCrawler search for critters

A is for Afghan

B is for Browser

C is for Collie

D is for Dog....

ABC books are relatively easy to think about because they deal with topics we tend to know about already. I want to focus on a topic that might be more difficult, about a subject slightly less familiar: Let's make an *Online ABC Book of Canada.*

Canada, our neighbor to the north, is studied during both middle school and high school years, but American study of Canada tends to be inadequate, at best. Most Canadians with high-school educations know infinitely more about the USA than Americans know about Canada. Most Americans don't know, for example, that "we" attempted to conquer and annex Canada in 1812, but failed, being beaten back by the Canadians at the Battle of Queenstown Heights. Canadians, you may be sure, know this! And this is only the beginning of "Yank" (as the Canadians call Americans) ignorance about "the True North" (as some Canadians call themselves).

After typically inadequate study of Canada by American school kids, "we" still often don't know that Canada is the largest country (in terms of land mass) in the world, yet with a total population smaller than that of California's. Most of us don't know that Canada is divided into provinces and territories, or what their names are. Most of us don't know that the United States and Canada share one of the longest open, unguarded borders in the world. Only the American tourist to Canada finds out that Canada does not have a dollar bill but a dollar coin, nicknamed "the Loonie." If your kids do not yet know this kind of information about our magnificent northern friends and relatives—or about French-speaking Quebec or the very many Canadian Native North Americans or the recent migration to Canada of Ukranians, Hong Kong Chinese, and several other nationalities that go to make up the complex and delightful Canadian national and ethnic *mosaic* (Canadians speak about a "mosaic" in preference to the American metaphor of a "melting pot"), then it's time to get them cooking on the Web to find out about Canada.

IN YOUR CLASSROOM:

The ABC Book of Canada

Goal

To gain a better understanding of Canadians, their land, geography, and government; their culture, history, and ethnic heritage; and their thoughts and feelings about Yanks. To begin the assembly of a body of information so that students can compare American culture with another culture that is enough like ours to make the comparison interesting, and enough different from ours to cause us to reflect on why we are what we are and they are what they are.

Rationale

The Land of the Maple Leaf is America's largest and most important trading partner. One of the two official languages of Canada is English; this means that Americans can speak their own tongue and be understood almost anywhere they go in Canada. Canada is the country to which Americans are most likely to travel and to which they can travel more easily than to any other foreign country—if Canada is "foreign." Part of the fun of studying Canada is finding out the ways in which they are "just like us" and the ways in which they are "really different." Because Canada is part of the course of study in U.S. schools, let's use the Internet to help us do a good job of finding out about our cousins to the north. Surf the Web and take a Canadian vacation without leaving home.

Objectives

Gather information about Canada from all kinds of sources on the Internet for comparison with knowledge about Canada gained elsewhere. Choose the best articles, pictures, databases, lists, newsgroups, maps, and other sources about Canada. Write an ABC book on Canada (at whatever level of sophistication the individual student is able to work), one that can either be shared with kids from a lower grade or retained for use by a subsequent class. The ABC Book is to include maps, charts, flags, pictures, and text.

Procedures

Set the stage by reading an ABC book to your class and letting them talk about the ABC books that they had "back when they were children." Hold a discussion about the elements of an ABC book. Propose making an ABC book that can be shared with another class. Talk about Canada, activating your students' prior knowledge about Canada, and proposing that Canada be the topic of the ABC book. Using the suggestions below as well as whatever your students themselves find on their

own, explore the Internet for information about Canada, relating this to any other information about Canada available from any other sources.

Because there is SO MUCH out there on the Net about Canada, an important part of this lesson taught with the Internet will be learning to discriminate among sources: avoiding redundance; selecting better sources in preference to worse ones (plucking the roses and leaving the thorns); finding specific, desired information. The Internet represents a major attack of information indigestion—we are all overwhelmed by it, like having eaten Thanksgiving dinner, Christmas dinner, and a New Year's Eve banquet all at once. Information management vis-à-vis the Internet is a whole new skill and may become a whole new profession.

Suggest that your students use the strategies in chapter 2 to find e-pals and keypals in Canada. These direct connections with live Canadians will be one excellent way to test first-hand the archival information that your students discover on databases. Because most Canadians speak English, an e-mail connection with Canadians is easy. Because many Canadians are particularly witty—and they do love a pun—e-mail correspondence with them will be great fun.

You may want to divide your class into several groups, each group working on a different type of alphabet book. You may also want the groups to be responsible for a segment of the alphabet, such as A-E, F-J, K-O, P-T, U-Z. (Because A-E is inherently easier than U-Z, you might want to mix the letters up: Group 1 == A, F, K, P, U; Group 2 == B, G, L, Q, V;, Group 3 == C, H, M, R, W; Group 4 == D, I, N, S, Z; and Group 5 == E, J, O, T, Y, Z.)

When the Internet work has been completed, and the *ABC Book of Canada* is ready for publication—whether in hard copy or online—partner your class with a class at a lower grade level so that your students may share their information about Canada with the younger kids and, at the same time, teach them something about the Internet. Before the cross-grade collaboration, give your students some guidance in what to expect from the younger kids, how to relate to them, how to show them the book, how to let them enjoy the book, and how to explore the Internet with the little kids, allowing the younger ones to have their hands on the keyboard. This may be your students' first lesson in teaching; the teacher's job is not to show off but to facilitate the learning of the student and the learner's joy in finding out and knowing.

Evaluation

Compiling the several groups' work, your class can produce its full *ABC Book of Canada* for sharing with another class. The process of bringing the various parts and pieces together can become a beneficial formative assessment as each group and individual students evaluate their own and one another's work in relation to one another

and the whole. Decisions will have to be made about what to include and exclude, balance, style, focus, look, feel, and the specifics of typography and book production. You can make this book as simple or complex as you and your students like, and it can take whatever physical form you choose—certainly a computer file, but also a printed-out hard-copy edition with pictures, graphs, charts, prose, facts, maps, stories, and whatever else your students want to include.

One major proof of the pudding will be in how well your class project goes over with students' younger partners, the kids in the class down the hall. The standard of assessment and evaluation during this phase needs to be the reception and enjoyment of your class *ABC Book of Canada*—another point for your students to have kept in mind as they were producing their book is audience. After the cross-grade collaboration, engage your students in a discussion of how it went with the little guys. Remind your students of the points you will have made in preparing them to work with the younger class (see "Procedures" above), and use those suggestions, now, as a check list against which to evaluate the collaborative experience. This evaluation will be a self-assessment conducted by your students of their own work with the younger students.

How to Visit Canada via the Internet

Canadian Web Master Index
http://www.sal.ists.ca/services/w3_can/www_index.html

Located in North York, Ontario, and a good place to start, this site has links to every province in Canada in both English and French, is diverse in its offerings, and up-beat in its feel for "what's happening." You and your students will have to discipline yourselves: It's easy to drift away from your research agenda, surfing from Website to Website, until you have hotlinked yourself right out of Canada.

Canadiana: Canadian Resource Page
http://www.cs.cmu.edu:8001/Web/Unofficial/Canadiana/html

Another excellent starting place and a must-visit site with diverse and vast amounts of information with which to fill our ABC book. This site has information about all the provinces as well as Canadian national news by way of the CBC, newspapers, and news magazines. Other departments include Travel and Tourism, Government and Politics, History, Education, Economy, *et alia*.

Canadian History and Government

Canadian History

Gopher: **gopher:** any one will do.

Address: **ftp.msstate.edu**

Find: . */Canada.html*

or pass go, collect $200, and go directly to this URL, using Netscape:

http://www.msstate.edu/archives/history/index.html

All this leads to a page that you can read in either English or French or both. The link possibilities from this point on are numerous: Check out "Teaching History on the Internet" with its further links to museums and art. In Canadian history, M is for MacDonald—have your students read the information on MacDonald to see why he belongs in any ABC Book of Canada

Netscape Canada—
http://www.emr.ca/opengov/departments.html

Leads you in French and English to the various governmental departments, including Agriculture, Canadian Broadcasting Corporation, Canadian Heritage, Packs Canada, Environment, Foreign Affairs, Health, Indian and Northern Affairs, Industry, Defense, Atlases, and more.

Canadian Government Documents
via either **ftp://ftp.spies.com=B2** or via Anonymous FTP:

Address: **ftp.spies.com**

Path: */Gov/Canada/*

Select: (documents of your choice)

Open the first document to the *Canadian Charter of Rights and Freedoms* to see the differences and similarities between the American democracy and the Canadian one.

Address: **wiretap.spies.com**

Choose: *Government Docs (US & World)*

Click on: *|Canadian Documents*

At this Anonymous FTP location, you will find many Canadian government documents, including the Canadian Constitution of 1867 as well as other documents important to the formation of the nation. Many Americans think that the Canadian government is the same as the American government. A visit to this site will be an eye-opener.

Geologic Survey of Canada
http://www.emr.ca/gsc/texthp.html

You can get information on subjects from earthquakes to gravity. You can ask a geologist a question via e-mail. Click on *Educational Materials and News* to find the geologist.

Geodetic Survey of Canada
http://www.geod.emr.ca/

Allows you to search for information about the geography of Canada; also has links to information about the government of Canada.

CIA World Factbook

Gopher:	**gopher.micro.umn.edu**
Choose:	*Libraries/Reference Works/CIA World Fact Book/C*
Click on:	*C* and page down to *Canada*

The American CIA—the U.S. "Spy Department"—collects facts about every country. The University of Minnesota is the location for the main CIA gopher and thus for the online factbook.

Canadian Weather
http://cmits02.dow.on.doe.ca/

Where you can get weather forecasts for every area of Canada, as well as maps, charts, and satellite imagery. In Canada, temperatures are shown in degrees Celsius, not Fahrenheit. This would make a good exercise for converting one temperature system to the other.

Here's a brainstormer chart to get your students started thinking about Canada in Internet terms of the ABC's. For practice, they can surf the Canadian sites mentioned above to answer the questions below, filling out the http addresses as proof of their discoveries. After they have practiced using this page, it's their turn to make up their own 26-letter ABeCeDarium of Something.

An Internet ABeCeDarium of Canada

A is for Aleut—http://
How many Native Canadian peoples can you name?

B is for Banff—http://
Where is Lake Louise?

C is for Calgary Stampede—http://
Who does the stampeding?

D is for Dogwood (provincial flower of B.C.)—http://
Where is British Columbia?

E is for Elizabeth the Queen—http://
Is the Queen of England still the Queen of Canada?

F is for French language— http://
Where do they speak French in Canada? How many people speak French there?
How many people speak Ukranian and other non-English languages?

G is for Gaspar Bay, Nova Scotia—http://
How cold does it get in the northern parts of Canada?

H is for Hudson's Bay—http://
What was the Hudson's Bay Company, and for whom was it named?

I is for Inuit—http://
Now how many Native Canadian peoples can you name?

J is for Jasper National Park—http://
Do Canadians or Americans do a better job of taking care of nature?

K is for Kingston, Ontario—http://
Who named Kingston and why?

L is for Loonie—http://
What's a loon?

M is for Maple Leaf Flag—http://
What else in Canada is called "the Leafs?"

N is for Niagara Falls—http://
Half of Niagara Falls is in Canada; where is the other half?

O is for Ottawa—http://
What is the structure of Canadian government? Can you name all of the provinces and their capital cities?

P is for Parliament and the Prime Minister—http://
How does Canadian government differ from American government?

Q is for Quebec City—http://
Quebec City is the only walled city in North America and the capital of New France. What else is called "Quebec?" How do the Quebequois pronounce "Quebec?"

R is for Regina, Saskatchewan—http://
Who was the *regina* they had in mind when they named the town?

S is for Saint Lawrence Seaway—http://
From where and to where and between where does it run?

U is for Union Corner Provincial Park, P.E.I.—http://
What are the Maritimes?

V is for Victoria Island, B.C.—http://
Where does America stop and Canada start? Ever heard of the Pig War?

W is for Winnipeg, Manitoba—http://
Where do people get the strange names that they give to their cities?

X is for xenophilia—http://
What is the basic Canadian attitude towards foreigners?

Y is for Yukon Territory—http://
Gold fever! What can you find out about the American gold rush into Canada?

Z is for Zones—http://
How many time zones does Canada have, and how do Canadians write the zip codes that indicate their postal zones?

An ABC Book of Anything is a fun way to learn, no matter what topic you choose. It is a natural way for your students (no matter what grade level) to write and draw their knowledge and share that knowledge with someone else. Not a lesson that, at first glance, draws on higher-order thinking skills, the ABC approach does allow your students' minds to rove widely and gather the fragments of information needed to give factual substance to "in depth" discussions. As you and your students work along, visiting Canada on the Internet, many opportunities will arise for a discussion of what all this information means.

CHAPTER 12

A WHALE OF A TIME:

WHALES, DOLPHINS, SEALS, SEA LIONS, ELEPHANT SEALS, SEA OTTERS, POLAR BEARS, WALRUSES, MANATEES, AND FRIENDS

Whales—like dinosaurs—fascinate kids. Willy is a whale. Flipper is a dolphin. Other deep-sea creatures—from Moby Dick to Nessie to Monstro—swim through our imaginations.

One reason that sea critters are compelling is because they are seldom seen by us landlubbers. Think of the trouble Captain Ahab had getting a closer look at his whale! "Free Willy" is a movie about our bad collective conscience over keeping these magnificent folk—who talk and sing to one another with a greater vocal range than humans have—in prison to satisfy our zoological curiosity. A kid who lives on either the Pacific or the Atlantic coast may once in a while get to see a whale or a sea lion in its natural habitat, but marine mammals can be visited mostly only in zoos and aquariums, or—like the dinosaurs—their bones and stuffed carcasses can be visited in museums.

Just as there is many a dinosaur lurking here and there at the right URL on the Internet, so also, however, can whales, dolphins, seals, sea lions, elephant seals, sea otters, polar bears, walruses, manatees, and other marine mammals be spied out there in the great ether sea, and—what's more—they can be Netted! This chapter contains a Netscape-only lesson that helps you refine your Internet techniques while simultaneously teaching about some nifty seagoing critters.

"Both at the same time"—this learning theory, in fact, underlies my whole approach in this book, and I offer it to you as a painless way to teach both content and method, both subject matter and Internet savvy, both skills and fascination, both at the same time: Learn all about marine mammals by learning how to Netscape well; learn well how to surf the Net masterfully and learn all about the sea critters—both with a few deft strokes.

If you want to, review chapter 3 to remind yourself of the basics of Netscape and to bone up on the abbreviations. Revisit the exercise proposed in that chapter in which I asked you to do a search for "whales," and we got 91 hits. Now, carry your Net whaling a bit further, or, rather, take advantage of the fishing that has already been done for you, and then sail on from there.

IN YOUR CLASSROOM:

Sea Zoo

Goal

To develop a better understanding of the characteristics, habitats, and aquatic adaptations of marine mammals, while using some of the capabilities of the Netscape program on the WWW.

Rationale

Most kids think that marine mammals are among some of the world's most interesting creatures. They are among the largest animals on earth, they live in the ocean, they breathe air, and they communicate quite effectively with tweets, whistles, clicks, grunts, moans, and other sounds reverberating through both air and water. Some of them look like a fish, act like a fish, swim like a fish, and even smell like a fish, but they are not a fish.

As your students learn about the marine mammals themselves, their habitats, where they may be found in the oceans and rivers of the world, and how they communicate with one another, help your students learn also about the human attempt to communicate with marine mammals, the Marine Mammal Protection Act, and the encouraging recovery of protected marine mammal species. Who would want to live in a world where there were no more sea otters to swim on their backs using their chests for a kitchen table? Who would want to live in a world where the humans had eaten all the whales? Who would want to live in a world where mermaids and mermen, manatees and dugongs, were extinct?

Objectives

Use Netscape to gather information about marine mammals. Show similarities and differences among the various types of marine mammals. Search out one particular type of marine mammal and develop a 3-5 minute "television program" about it (or other type of report/analysis), downloading video and audio coverage, if possible, with which to illustrate the program. Explain the impact of the Marine Mammal Protection Act on marine mammals and other fisheries. Determine whether the Protection Act has been instrumental in the recovery of protected species. Have groups of students complete and share with the class a K-W-L chart on a specific marine mammal. Show the similarities and differences among the several marine mammals.

Procedures

Set the stage by showing pictures of marine mammals to heighten your students' interest. Brainstorm with your students about what they already know about marine mammals, using a K-W-L chart:

K-W-L about Marine Mammals

What do I KNOW about Marine Mammals?	What do I WANT to know about Marine Mammals?	What have I LEARNED about Marine Mammals?

During the first session, your students will fill in the first two columns; after they have surfed the Net in pursuit of all kinds of marine mammals, they will fill in the last column to make apparent what they have learned. Post the chart in the classroom so that, as it fills up with information, everyone can see exactly what they are learning.

Using the big K-W-L chart as a guide, propose that your students, either individually or in groups, develop their individual K-W-L charts for a marine mammal of their special interest. They can choose from a wide variety of fields of information, including—but not limited to—the following: habitat, characteristics of a particular species, characteristics of individual marine mammals, locations where various species are found, pictures of individual critters, impact of the Marine Mammal Protection Act on specific groups and habitats, various marine mammals in stories

and books and poetry, scientific articles and reports about marine mammals, communication techniques of various species, human attempts to communicate with marine mammals, hunting/harvesting and human uses of marine mammals.

After your students have completed gathering their information and developing their individual or group K-W-L charts, they then may use the charts as a basis for leading a class discussion on the marine mammal(s) that they have learned more about. From the K-W-L charts a comparison/contrast chart can be developed to show similarities and differences among the various marine mammals.

From all the information gathering and presentations, a class database can be amassed on marine mammals, making the collective information base readily accessible. Make these charts on a computer with a word processor or database program, where they are easily revised, expanded, corrected, enlarged, and reformatted according to whim and bright idea. The information base then becomes a substantial basis for filling in the third column on the big K-W-L chart: "What we LEARNED."

Evaluation

The several individual and group K-W-L charts, and the in-class presentations made in reference to them, form one basis of assessment. Establish a grade on two main premises: method and content.

Content: How much, in what detail, what kinds of knowledge, how interesting, what personal insights, what relevance to your students' own lives, what meaning derived and transferred to other aspects of life?

Method: What extent of Websurfing, how clever a use of search engines, how thorough a search, how many mirrored sites, what elusive or unexpected sites, what use of non-Netscape technology, what discovery through personal contact made via e-mail, lists, or newsgroups?

Use the big K-W-L chart as a class equalizer—having made sure that everyone took part in contributing to the big chart, give it an A and share that A with the whole class. Collaborative effort *ought* to result in greater results than merely individual effort. Make sure that it does!

This unit on marine mammals may be the first solo Netsurfing that your students have done. Help them get started, if they have trouble; and to help you get started, check out Browser's boxes below, where you find strings of URLs that will lead to quite a catch of sea creatures.

A full Net

Bottlenose Dolphins:

http://www.bev.net/education/SeaWorld/Bottlenose_Dolphins/indexdol.html

Follow the links and learn about physical characteristics, scientific classification, habitat, food and feeding, gestation, sleep, social structure, etc.

Dolphins Rehabilitated by TMMSN

http://www.rtis.com/nat/user/elsberry/marspec/tmmsn/rehab.html#xeno

Two personal-interest stories about two stranded dolphins, how they were saved, rehabilitated, released, and tracked.

Killer Whales

http://www.bev.net/education/SeaWorld/Killer_Whales/indexkw.html

Contains information on Orcas similar to the information on dolphins, above.

Manatees

http://www.bev.net/education/SeaWorld/Manatees/indexman.html

Some people think that sailors saw manatees and dugongs and thought that they were seapeople.

Walrus

http://www.bev.net/education/SeaWorld/Walrus/indexwal.html

Has everything from flipper size to molting; information in outline form.

Baleen Whales

http://www.bev.net/education/SeaWorld/Baleen_Whales/indexbw.html

Learn how these ocean mammals, the largest on earth, without teeth strain their food, tiny krill, from the sea.

As you can see, there's lots of good stuff at bev.net.

Websites that enhance ecological awareness

Marine Mammal Protection Act
http://ash.lab.r1.fws.gov/cargo/mmp.html

Careers in Marine Science
http://www.rtis.com/nat/user/elsberry/marspec/mmstrat.html

Marine Mammal Research Program
http://www.rtis.com/nat/user/elsberry/marspec/mmrp.html
Has a good list of objectives that could be incorporated into a unit on marine mammals.

Marine Mammal Interactions with Fisheries and Other Commercial Activities
http://kingfish.ssp.nmfs.gov/text/chapter2.txt
Comprehensive and sometimes complicated, a look at the interface between marine mammals and the fishing industry; for your more advanced students.

The Charlotte Whale Page
http://mole.uvm.edu/whale/tableofcontents.html
Not about a whale named Charlotte, but the paleobiology of whales. Information about the fossilized whale skeleton found in Charlotte, Vermont.

Homepage for Wesley R. Elsberry
http://204.96.15.10/nat/user/elsberry/
An unusual home page, with links to other good marine mammal sources. Suggest that your students communicate with Mr. Elsberry. (Incidentally, you and your students might want to compare Mr. Elsberry's home page with many of the thousands of others, and then talk about the intelligent, special, inventive use of home pages to do more than merely express one's opinion.)

Teaching resources for teachers, learning resources for students

Very many ready-made lesson schemes about marine mammals are downloadable from the Net for your immediate classroom use. You and your students can find them at the addresses in Browser's box.

Dolphin Documentary
http://www.bev.net/education/SeaWorld/bottlenose_dolphin/k3act ivitydol.html
A K-3 one-day lesson plan about dolphins.

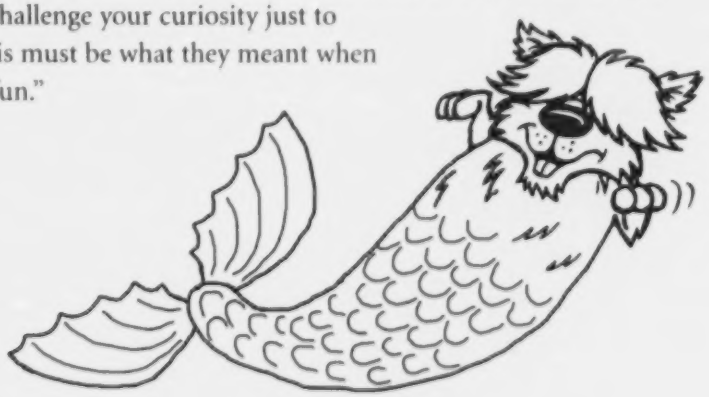
How Big Is a Blue?
http://www.bev.net/education/SeaWorld/baleen_whales/howbig.html
A one-day lesson on measuring and comparing different sizes of whales.

Orcas
http://www.bev.net/education/SeaWorld/killer_whale/nowhearthis de.html
A K-3 lesson on the hearing capacity of Killer Whales.

Bottlenose Dolphin: Latin Lingo
http://www.bev.net/education/SeaWorld/bottlenose_dolphin/48act ivitydol.html
A 4-8 lesson that explains the scientific naming of dolphins. If you are working on root words and Latin derivatives, you can use this good location.

Pick Your Critter!

Now you know what Netscape can do for you as a teacher, but only on one narrow range of topics: marine mammals. The world is a zoo, and we are but a few of the critters in it. Use the search engines, adapt the learning strategies suggested here, pick your own favorite critter and let your students pick theirs, and surf bravely out onto the Net to discover further information and more activities, instruction ideas and learning strategies that suit your style of teaching and your students' inclinations. All you have to do is click on Netsearch to find home pages and whole screens full of hotlinks to more and more Webpages named *Birds*, *Ornithology*, *Domestic Animals*, *Pets*, and the like. Look at *Zoo Animals* or *African Animals* to get started by reminding yourself of how many different creatures there are. The list is so big, it will expand your imagination and challenge your curiosity just to marvel at its length. This must be what they meant when they said: "Learning is fun."



CHAPTER 13

THE NEWS

It's hard for some kids to learn to plug themselves into state, national, and international current events. They do not yet grasp the immediate relevance of stuff "out there" to themselves; their sense of interpersonal connectedness to people that they do not know personally has not yet expanded; their process of moral development (Kohlberg, Piaget) may not have taken them even to the "us/them" stage, yet.

Another cause of students' lack of connection with a world bigger than their own wants and needs is that the TV Network news programs do not pitch to young people. The advertisers aim at selling their products to older folk—they know who's watching. The news on PBS is all talking heads, slow-moving, and cerebral; the news on the commercial Networks is more colorful, more active, and with more human interest, but little is offered to attract the attention of anyone still in school.

So I started thinking about how to make the news less boring and get the kids better informed by including the Internet in the equation. The Internet offers even less action and less color than does a television broadcast, but—unlike TV—the Internet is not a passive medium. The Internet activates the brain rather than—like TV—dulling it. A hands-on Internetter doesn't just sit there and watch; one interacts. The Internet is (for the most part) still free of advertising (which would be a drawback on TV, where the ads are often more interesting than the programming), but it can move as quickly or as slowly as the peruser wants. Young people move faster than old people do—bodies, minds, eyes, fingers. Something that moves too slowly, the young'uns label with the ubiquitous term "boring." Movement on the Internet depends on who's moving. The Internet is aimed at everyone or no one, so it's up to the individual user to make something of it that he or she wants—there's no one to blame but yourself.

Some students who are less interested in political and other typical news items might be more interested in sports news, which one can access through the numerous sports sources on the Net. I believe in trying almost anything to get my students hooked on the news, be it sports, up-to-the-minute reporting, human interest, disasters, or whatever. Current events are important, so I pull out all the stops to prove that they are interesting, and the Internet can help.

The Internet is up-to-date—news on the Internet comes in real time. Online types who exploit the Internet for its news-gathering potential know that one can get information from critical situations around the world more quickly via e-mail, lists, and newsgroups than in any other way. By reading news on the Internet, I knew more details about the Kobe earthquake ten minutes after the first tremor than network news teams were broadcasting the next morning! I also saw the newly discovered cave paintings in France before they were published in *Time*. I can get minute-by-minute accounts of sporting events. Washington-watcher that I am, I can follow events on "the Hill" on a daily basis, read press releases from the President, read speeches given by the leading political figures of the day, and when I'm really being a glutton for punishment and politics, I can read the *Congressional Record* online. The Internet is now, and kids like that.

In class, you can use Gopher, telnet, ftp, or the WWW to access the news on the Internet, and you can use these online personal news services either as stand-alone devices or in conjunction with the other media—newspapers, news magazines, radio, television, and even short-wave radio (e.g., "The Voice of America")—as means to plug your students into the world they live in. You can make news-gathering a daily part of your curriculum; you can build a news perspective into any thematic unit that you teach; you can make learning how to find the news, read the news, and understand the news a part of your instruction in learning on the Internet. Once they get hooked, you must realize, you will have created a few more news junkies, but that's the risk you run.

IN YOUR CLASSROOM:

Flash! Kid reporters do the news

One way to get your students involved with the news is to have them publish their own weekly newspaper or stage their own news broadcasts. If you want them to work on reading and writing skills, set up a news publishing organization in your classroom. If you want them to work on oral communication skills, have them produce and perform news broadcasts. At the stage where they use the Internet for news-reading, news-gathering, news-understanding, and news-summarizing, the

process is essentially the same, whether they will ultimately present their results through print or in person.

To set up your Internet News Bureau, brainstorm with your students what departments will be required. Local, state, national, and international news departments come to mind, as do departments for weather, sports, business, fashion, lifestyle, and human interest. Certainly you and they will want an editorial department, featured columnists/commentators, a personal advice columnist, and even letters to the editor from the readers.

Let your class divide itself up into teams of Internet reporters, one team for each major department. Their tasks are to find items from the various news sources on the Internet, correlate what they find with news in print and other news media, understand and interpret what they find, and then report (i.e., write) their own news stories. (Whether they will ultimately produce a newspaper or a broadcast, they still need to write copy.)

The means of publication are up to you, your students, and the technical capabilities at your disposal. You can report the news to your class through something as simple as a weekly news presentation during which each student reports to everyone else what he or she or the team has found out. Your class could sponsor a weekly news broadcast over the school's P.A. system. If you have closed-circuit TV in your school, you could prepare a TV news program for broadcast once a week. You could publish your class's own newspaper for distribution to school mates, parents, and neighbors. You could set up a homepage on the Web, and offer yourselves, your e-mail Network, and the rest of the world your class's weekly online news digest. The possibilities are endless.

Goals

To gain a better understanding of current events, their local and global impact. To get an idea of how the news is gathered and prepared for release to the public. To learn what it takes to produce a weekly newspaper or a weekly news broadcast. To learn personal, intellectual responsibility in communicating matters of import to other fellow human beings.

Rationale

Young people need to know that they are not isolated but part of a larger sphere of interest and influence that encompasses the world. By expanding their horizons, so that they think about how local, state, national, and international events all work together to "make the world go around," your students will become more active members of their global community.

Objectives

Read news from the Internet in at least the following departments: local, state, national, international, politics. sports, business, fashion, lifestyle, human interest, weather. Select the best items in each department to digest and re-report in some other news media, whether a class/school newspaper or broadcast. As reporters, write the news, articles, editorials, etc., in each department. Publish the news electronically on your own homepage.

Procedures

Whet your students' appetites for news by asking them what some of the events of the last week were that really caught their attention or sparked their imagination. Discuss those items and then list them on the board or overhead transparency so that they look like the headlines of a newspaper. Tell your students that for the next few weeks they are going to be daily reporters, working either to publish a weekly newspaper or present a broadcast. They will be telling the main events of the week in each of the categories listed and offering their editorial opinion on the news they are presenting. Explore the various news resources available to them—newspapers, news magazines, radio, television, and the Internet—not to forget their own personal reporting of the local news. Have your class divide itself up according to individual interests into the several news departments.

Evaluation

The newspaper or broadcast that your students produce will be the tangible result of this learning process. (Depending on how crazy the first effort made all of you, you can decide whether or not to do it again!) In the long run, look to see if your students know something about current events and whether they can carry on an interesting and informed conversation about the realities around them that affect them. Also, they will have learned something about the tricky and much-debated issues of reporters' objectivity and subjectivity, whether something is newsworthy, "sex, crime, and violence" in the media, privacy and publicity, and freedom of the press and of self-expression.

I do not take up space in this book listing the various major newspapers, news magazines, and radio and television sources. You and your kids have TVs and radios; turn them on to find out what's there; go to the newstands to see what they offer. Neither do I take up space talking about what to do with your news, once you get it. You may decide to publish a newspaper or broadcast the news, and if you do, take advantage of any number of good books, teacher's guides, and periodical literature on journalism and broadcasting that will give you ideas on how to address your publics and the technology of your chosen medium. I hope that you will decide to post your

news digests to the Internet from your own homepage. If you do take that route, I enter herewith my subscription to your news service: **ecotton@oavax.csuchico.edu** Thanx!

Internet News Resources

General News Sources

The Gate
http://cyber.sfgate.com/

Contains the Web pages for the *San Francisco Chronicle* and the *San Francisco Examiner.*

This summer, there are 124 newspapers on the Net.

The University of Florida, College of Journalism and Communications
http://www.jou.ufl.edu/commres/webjou.htm

Has a list of links to commercial newspapers with Web editions all over the world. This is a very extensive, rich list.

CNN
http://www.nmis.org/NewsInteractive/CNN/Newsroom/contents.html

Has daily newscasts via Internet. This site is set up for teachers and classes; it offers daily lesson plans and quiz items and thought-provoking questions. Following news reports on CNN-TV and on CNN-online would be one good way to compare the news as reported in the two media.

Teletimes
http://www.wimsey.com/teletimes.root/teletimes_95_03.html

A good example of a student-published online news report. This news digest is published in English, French, and Esperanto by a high-school student in Vancouver, British Columbia, who has fellow high-school reporters sending in news from around the world. The graphics and the stories are interesting, and there's lots of activity. This site is sometimes busy and hard to reach.

CRAYON
http://www.eg.bucknell.edu/~boulter/crayon.html

Does not sound like newspapers, but it is. CRAYON is an acronym (of sorts) that stands for CReAte Your Own Newspaper. CRAYON offers super-cool methods of styling your own headlines as well as nine categories of links: USA News, World News, Weather, Information and Technology Reports, Arts and Entertainment,

Sports, Funnies, Tabloids, and New and Hot Web Sites. CRAYON is an excellent site to learn about how to make a newspaper work, a must-see for your students, and a good jumping-off place to find out more information for each of the departments that might be included in your own newspaper.

American Politics and More

Thomas (named for Thomas Jefferson)
http://thomas.loc.gov/

has links to the House, the Senate, the *Congressional Record*, the Library of Congress, and many other departments that focus on politics and American life.

Government Information Sources on the Internet can be found at NYSERNet.

Gopher: **nysernet.org**

Choose: *Special Collections New York State and Federal Info*

You can read about the latest budget proposal or governmental waste, at this GopherSpace location.

Browser has sniffed out a few sources for you as good examples of what is available in international news on the Net. To find other sources, specific to the country or region of your interest, go to the Internet Directory and under Yahoo click on *News* and see what develops.

Sources of International News on the Net

Australian News is found in GopherSpace from the University of Montreal in Canada.

Gopher: **megasun.bch.umontreal.ca**

Choose: *Australiana/* (news, sports, FAQ's, etc. about Australia)

Select: *News from Australian Newspapers*

(N.B.: People in many countries write dates differently from the way Americans do: July 4, 1995 would be written with the day, not the month, first: 4/7/95.

News from the week of May 1st through 7th in 1995 is written 1-7/5/95. It's different, but logical.)

Chinese News Digest Server
http://www.cnd.org.html can also be accessed by Gopher.

Gopher: *cnd.org*

Once you get to the address, follow your inclinations with the files and links.

Croatian Ministry of Foreign Affairs

Gopher: *rujan.srce.hr*

Choose: *English Language/Actual News, Notices and Events/Croatian Homeland Association*

This site can be tricky because it is written in both English and Croatian. Not for the student in a hurry, it takes some sifting to get through all the files to the good stuff.

French Daily News Transcripts
http://phoebus.Colorado.EDU:8080/Revues.html
Sometimes, I've had trouble accessing this site.

Voice of America

Gopher: *gopher.voa.gov*

An excellent source of all kinds of news about America, but styled for foreign consumption.

Sports News on the Net

Sports are everywhere on the Net. Browser's box contains only a few of many locations. Your students will find many more.

The World Wide Web Virtual Library
http://www.atm.ch.cam.ac.uk/sports/sports.html

Has a built-in search engine, as well as links to just about every sport imaginable. This page is phenomenal! Sports aficionados will never want to stop reading this book of electronic pages. Your reporters will have a great time surfing these pages for the latest-breaking sports news. *American Football* is one of the links, or you can go directly to *American Football* at this URL:

http://www.atm.ch.cam.ac.uk/sports/gridiron.html

Baseball is another link, or you can go directly to *Baseball* at this URL:

http://www.atm.ch.cam.ac.uk/sports/baseball.html

Canadian Football
http://www.CFL.ca/

The National Football League
http://www.cs.cmu.edu:8001/afs/cs/user/vernon/www/nfl.html

Lots of info plus team logos.

Sports Information Server
http://www.netgen.com/sis/sports.html

Hotlinks to hockey, basketball, football, and international sports.

Nando X Football Server
http://www2.nando.net/SportServer/football/

Links to the NFL, college teams, and a chat line.

Baseball Schedule

To find out where and when the next major-league baseball game is going to be played, check the Gopher at the University of Colorado at Boulder:

Gopher: **gopher.colorado.edu**

Choose: *Professional Sports Schedules/Major League Baseball Schedule*

Baseball Teams
http://www.yahoo.com/Entertainment/Sports/

Has more information about baseball than any normal human being would ever want to know!

Professional Hockey Server
http://maxwell.uhh.hawaii.edu/hockey/hockey.html

With hotlinks to other hockey Webpages. If hockey is your sport, this is your first stop on the Net.

The World Wide Web Virtual Library, with its many sports links, some of them with their own, direct http addresses, is a good example of mirrored sources: You can get there more than one way. When one means of access is down, it is useful to know that other links are open. One of the main rules in working with computers is, "When in doubt, cheat!" The only important question in this utilitarian universe is, "How do I get this to work?" It is good to know both the regular ways and the irregular ways to find out what you want.

National weather service forecasts

And finally, what's a news report without a wise-cracking weather person?

National Center for Atmospheric Research

Weather information is maintained by the University of Illinois and is updated daily. You can get to this site a number of mirrored ways; perhaps the simplest way of access is to gopher to the ILLINI:

Gopher: **wx.atmos.uiuc.edu**

Click on: **states**

Then find your state and the area you are interested in. For a mirrored way of access to the daily weather information:

http://http.ucar.edu/metapage.html

Current Weather Maps and Movies
http://rs560.cl.msu.edu/weather.html

A great site if you have a fast computer, as it has pictures and movies showing what the weather is doing in various parts of the world. It's fun on a fast computer; it'll make you either suicidal or homicidal on a slow one. I have a slow computer.

The weather sites tend to be horrendously busy, so be willing to try the mirror sites and be patient.

As you and your students work with the news, you will find many more resources and locations than these few that Browser has sniffed out for you. In my experience, getting kids to become news reporters is one of the best ways to get them to have fun while learning, and learn something useful while they are having fun.

CHAPTER 14

GET A JOB!

One of the benefits of an education is that it can help you get a job. One step towards getting a job is writing a résumé. The Internet is a great resource for finding out more than you want to know about conceiving and writing and targeting a résumé, finding a job, interviewing for it, and selling yourself personally and professionally.

The purpose of this chapter is to let senior high-school students explore the various résumé home pages on the Web and craft their own résumés in preparation for a job interview. This résumé can be either for a job right now or part of an application for college. Either way, résumé writing is a skill that every one of our students will need upon graduation and for the rest of their working lives.

IN YOUR CLASSROOM:

Job hunting with a safety Net

Goal

Understand résumé development in order to craft a persuasive, effective résumé.

Rationale

Getting a job is one of the main biggies, and writing a powerful résumé is one of the main giant steps towards the job a person wants. Every professional needs to keep his or her résumé up-to-date because in today's world of unstable employment, one never knows when one is going to need it. Practice in résumé-writing will help

high-school students learn what it takes to produce a résumé that gets the job done right and gets a job.

Objectives

Surf the Web to locate some home pages about résumé-writing. Surf the Web to locate individual home pages where people have posted their résumés. Develop a résumé based on background and experience while using tips from the résumé experts on the Internet. Use the résumé in an interview improvisation situation.

Procedures

Set the stage by showing your students a variety of résumés. Some of the résumés should be very good and some should be just the opposite. Discuss the aspects of each type of résumé. There are many résumés on the WWW, so samples are easy to find.

How to find résumés on the Web

First, you get a computer.

Then, you turn it on.

Next, in Netscape, you use a search engine, like WebCrawler or InfoSeek, to search for words like "resume," "resume writing," "curriculum vitae," or "vita," and see what you get.[1]

Or you can do a Veronica search in Gopher using the same search strategy.

Each week, new sources are put on the Net and old sources are upgraded.

Tell your students that they are to develop résumés that will help them get jobs or help them with their college applications. Show them various sites on the Internet that help with résumé development. Let your kids visit the résumé sites and glean the information offered there. The final product is each student's design of an honest, workable, effective résumé that can be used to find a job or as part of a college entrance application or application for a scholarship, loan, or grant.

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[1]We might as well get the words right, even if nobody else does and nobody else cares. *Résumé* is a French word and it has two accents, although we have Anglicized it, so that you can get away with only the final accent: *resumé*. *Resume*, without any accent at all, is just plain wrong, and, besides, it's misleading: We already have a word in English spelled *resume* that means "to start over." On the Web, no one bothers with accents, of course, as the software doesn't support anything that fancy.

Curriculum vitae is Latin for "the course of a life." It is bad Latin to write "cur.iculum vita"—makes no Latin sense; the case ending is wrong. You can get away with saying *vita* ("life") without the *curriculum*.

Evaluation

The final product is the proof of the lesson. Are the résumés honest, workable documents? Will they be effectual in the eyes of a prospective employer or admissions officer? Are they attractive as well as useful? Get some parents involved who have experience in the business world or in higher-education admissions: Ask them to look at working drafts of the résumés and make comments and offer suggestions. When the résumés are ready, invite a couple of parents to your class to stage mock interviews with your students based on their résumés.

In Browser's box are some starting places on the Internet where you and your students will find useful information about résumé writing. A few sources are specifically for high-school students, but some sources are specifically for college students and professionals. These are links your students can use when developing ideas for their own résumés.

Net help with résumé writing

Joyce Lain Kennedy's Electronic Resume Writing Tips
http://www.espan.com/js/ref/jlkresu.html
Nine basic rules of résumé writing, good advice, but no examples of résumés.

Top Ten Technical Résumé-Writing Tips
http://www.taos.com/resumetips.html
Don't let the technicalities get in your way, for the ten writing tips are good ones; these ten reinforce Kennedy's nine.

Top Secrets of Resume Writing
http://amsquare.com/america/advance2.html
Lots of secrets revealed on how to make a résumé shine.

A Guide to Effective Resume Writing
http://www.ceweekly.wa.com/helpful/grw.html
Guidance on how to write, typeset, and deliver a résumé.

It's easier for beginners to visualize their own résumés after they have seen some samples. Not many high-school kids are seeking jobs over the Internet, so there are not many résumés by high-school students posted on individual home pages. Hundreds of résumés, however, have been posted on the Net by college students, both undergraduates and graduates. These offer excellent sources of form and substance, both good and bad. For a look at some of the résumés, call on the WWW at this URL:

http://cmc.www.drexel.edu/otherPages.html

If you want to put your students' résumés on-line, the Internet makes a way. One place to get résumés published on the WWW is at this URL:

http://rohan.sdsu.edu/home/nsbc/mosaic/resume.html

—log on to the page and follow the directions: Dialogue boxes ask for input, and after each box is filled, the user can upload that information to the WWW with a simple keystroke.

Once students have composed their résumés based on examples and advice given from various Websites, they need to prepare their texts in machine-readable form on a good word-processing program. This will lead to good experience at designing a résumé that is attractive and useful.

A résumé that is maintained in a machine-readable file can be updated easily—a never-ending task. When your students get another job or finish another class or accomplish something else they are proud of, they can easily add their accomplishments to their résumés.

The résumé-writing pros all say that a résumé needs to be tailored to each job opportunity to meet the conditions and opportunities of a job offering or a college application. A generic résumé—one size fits all—is bad strategy. Tailoring your résumé on a word processor is a piece-o-cake.

A résumé is a personal advertisement. It needs to be proofread by colleagues and friends before it is posted to see if it conveys the message it is supposed to convey. Résumé writing is, therefore, a high-interest opportunity for group collaboration as your students read and critique each other's résumés, making comments about how to make one another's self-ads more effective.

A final word about good taste in public: You will quickly note that many personal home pages on the Web and some résumés seem to be written without much thought as to what others may think about them. Before posting a homepage or résumé on the WWW, let it rest a day or two, then reread it and check to see that it says what you want it to say. Resist the urge to post items that show anger, embarrassment, or self-doubt. If your Webpage is not yet ready to post, then don't post it yet; post it only when it is ready.

Call your students' attention to these blemishes in other people's self-ads, and engage your people in a discussion of how to put one's best foot forward in a global, public display of one's life, accomplishments, and talents. A home page or résumé does not have to be boring or dull, but it does need to be professional looking and positive sounding.

CHAPTER 15

LOOK WHO'S TALKING!

Language and society on the Internet

The Internet is all about communication. The Internet isn't a thing out there; nobody owns it; nobody controls it; it's all over the place in general, but it's no place in particular—like that famous mystical circle whose circumference is nowhere and whose center is everywhere. The Internet is a happening—people freely talking to one another through their computers, no more, no less, and all the programs, search engines, protocols, and what-have-you are merely the bells and whistles that are gradually making the Internet easier and easier to use. The Internet, therefore, because it is people conversing, is both simple and complicated; it is an international, cross-cultural society based on the electronic communication of millions of people around the world all talking at the same time—the greatest single conversation that has ever taken place. That's what this lesson is about.

Search engines available on the Internet are numerous, and their number and power are growing. Having done a bit of searching in chapter 10, you and your students can now put that knowledge to work and make use of some other search engines, too. This chapter gives you more experience with Veronica, InfoSeek, WebCrawler, Lycos, Yahoo, WAIS, and the Internet Directory. The best browser, of course, is Browser himself, and he is ready to do some sniffing out for you.

Our purpose in this chapter is to use Internet search engines to explore a language and a society; that is, to use the Internet to take part in the global conversation.

IN YOUR CLASSROOM:
Communicating with the world

Here is an open-ended beginning that you can finish any way you like, and, along the way, achieve two diverse goals.

Goals

Gain a hands-on understanding of the various search engines available on the Internet. Learn about the culture of a particular society by studying its language and customs.

Rationale

Our students need to know how to search the Internet to find what they want to know. Using the Internet's search engines in pursuit of knowledge about the topic of this lesson will give them hands-on experience that they can transfer to searches for other matters of interest. From body language to sign language, from Arabic to Zulu, human beings communicate with each other through languages of many kinds—an ideal topic for study on the Internet. Your students will study a language, a society, and the country where these combine to form a human culture.

Objectives

Use various Internet search engines to locate information related to language, culture, societies, and other countries. Select a language used by human society, and a country where it is spoken, and, in groups, study various aspects of the language and the society. Students will communicate via e-mail with people who live in the country being studied, to find out about customs, traditions, mores, values, holidays, dress, school system, economy, politics, the flag, the map, points of interest, and what's up and what's cool. Gain a mental map of a global neighbor. See in what ways other societies are similar to, and different from, our culture and other cultures being studied. Students will individually collect sets of links to home pages, Gophersites, ftp, and telnet locations that relate to the selected people and their language. Then they will share their links and their discoveries with other class members, and—when you get your home page up and running (see chapter 18)—your students will communicate their Internet international relations with the rest of the world.

Procedure

Set the stage by sharing magazines published in a language other than English. Look at the articles, pictures, jokes, and ads. You and your students can talk about what seems to be going on and identify the languages and cultures represented. You won't necessarily understand everything that you read and see, but you've got to start somewhere! Ask your students to try to decipher the meaning of some of the printed text—ads are a good place to start, especially since advertising lingo around the world is heavily influenced by American English. Read an article—at least give it a try—in some other language. If you choose a language that happens to be spoken and read by some member of your class, you'll have an in-house translator. Invite the speakers of languages other than English in your class to bring magazines from home and page through them with the class, reading, interpreting, commenting on language and culture.

Move to the Internet and find some sites where the language on the screen is not English. For example, in chapter 13 on the news, newspapers printed in Croatian and French are listed. Many Canadian pages are printed in both English and French. Activate prior knowledge about the many languages spoken in the United States, in North America, in the Western Hemisphere, and in any region of the world from which your students or their ancestors may have come. Keep a list going on the board of the names of the various languages and their countries that are somehow represented through the people in your classroom.

Make the assignment: Tell your students that they will be working in groups, using Internet search engines to find out everything they can about a selected language and a country where that language is spoken. They will be communicating via e-mail with people in that country. Encourage anyone in your class conversant in the chosen language to communicate in that language with contacts in the country. Divide the students into manageable groups, perhaps on the basis of individual preferences for language and country: a Mexico group, a Japan group, an Indonesia group, and so on. For the culminating report, each group will present its set of links to home pages and other aspects of the Net, demonstrating their efforts to find their chosen language, society, culture, country, and people on the Web.

Give your students the guidelines that you want them to follow. When kids—and adults, too—surf the Web, there is a tendency to wander. To keep the assignment in focus and make it manageable, you will need to give your students a clear set of directions. Information management is one of the most important services that the teacher can render in the instructional environment of the Internet: What to look for and, as well, what can be avoided, for there's more out there than anyone has time for. You might consider these:

- information about the language
- samples of the written language
- samples of the spoken language
- comparisons to English
- regional variations in the language
- information about the country: map, flag, economy, customs, traditions, holidays, places of interest, school system, type of government, political leaders, national dress, similarities and differences with other countries, what's up, and what's cool

Go, Browser, go!

To get them started, give your students specific instruction on how to use the various search engines on the Internet. The easiest way to start is probably with Net Search, using a general search engine such as Yahoo. Here your students can find a category that might relate to a country, government, or language of their choice. As you know, Yahoo or any other browser search engine will post a list of relevant hotlinks.

While still in a browser like Netscape, go to InfoSeek and type the name of either the language or the country. Try Lycos next, and you can choose either the large collection or the small collection. Since I'm impatient, I use the "Short Lycos Search," but it's up to you.

WebCrawler is another search engine that uses whatever search term you type in, but you can set the search to retrieve any number of hits—say, 500. Notice that with each hit you also get a three-digit number. When you see, let us say, 786 or 329 with your hit, that does not mean that this hit is numbered 786 or 329, but that out of a perfect score of 1000, this hit rates a 786 or a 329 by way of comformity to your search terms. A 786 is a pretty good hit, whereas a 329 is considerably less good. The retrieved lists are ranked, further, in a "goodness of fit" order, with the "best hits" listed first, and the "worst hits" listed last. Every time you get a hit that is relevant, save it with a bookmark. BTW, the numerical ranking is an automatic computer response based on pattern recognition; it may bear little relation to reality.

From there, move on to GopherSpace and search with Veronica. Use the same keyword search-term approach, typing them in when you see a Veronica ? or an icon for binocuiars. The difference between a Veronica search and a browser search is the ordering of the retrieved information: Veronica gives the information back in alphabetical order. In either case, you have to decide which information is relevant to your search and which is garbage. Remind your students to save the Webpages that they like with bookmarks.

A Wide Area Information Search is usually called a WAIS (pronounced "ways") search. Similar to the other search engines, WAIS searches information, as its name indicates, across a very broad spectrum. This can take a long time to complete. In GopherSpace, you will see folders with "WAIS" written in the description line. Click on that file, type the keyword, and go from there. Follow the same process in a browser when you see a hotlink that says something like this: "Do you want to do a WAIS?"

Each search engine will produce a slightly different set of information at first, but as more information is gathered, you will find the hits becoming redundant. That's the signal that your search is finished. Again, don't forget to save the relevant Weblinks with bookmarks. No bookmarks, no report!

Allow groups of students regular 40-50 minute sessions to search the Net on their language and society. At this rate, the Website-gathering part of the process might take as much as five or six days. After they have completed the searches, they will need time to develop the links and oral information into a "Web Program" that they can present to the other students in the class. Thus each group will have generated a set of relevant links as well as a written and an oral report. The links and oral report will be presented in class so that other students may use the results of everyone's searching to learn about languages and societies, people and countries.

Evaluation

Have student groups share their sets of links with the other groups in the class. Let other groups do short test searches, using the sets of links presented: The proof of the pudding is in the eating, so if other students can use a set of search results to find the same Websites and information, that's the proof of the pudding. Watch for these specifics:

- Are the URLs spelled correctly?
- Do they connect with the desired Websites?
- Are they logically organized, appropriately selective, and manageable in number? (It's no trick at all to generate a bunch of URLs, but it is a demonstration of intelligent search strategy to present 20 select URLs that take

searchers precisely where you and they want to go and Net you the desired information.)

Discuss each set of links in relation to American English and the United States. Reach some conclusions about the similarities and dissimilarities of people around the world.

¡Adelante a Mexico!

I've chosen Mexico and Mexican Spanish as my target language and country on which to build this model of studying language and society on the Internet. Because there are many Hispanic Americans, Spanish language is a good choice—you'll probably have some help sitting there in your classroom.

According to a Gopher search, Spanish is spoken in 33 countries. Subtract Mexico, and you've still got 32 other countries. Your students are, of course, welcome to take Mexico as their target country, too; their selection of Websites and resulting study will be different from this one if for no other reason than that new Webpages are coming online all the time. By the time this book gets from me to you, Mexico will have thousands of new Websites, so that my search results, presented here, will, in part, be out of date.

When I clicked on Net Search in Netscape, and typed "Spanish" at the InfoSeek query, the following was the result of my search:

The first three hits

You searched for: Spanish and Portuguese Languages

- *Spanish and Portuguese Department. 4048 Jesse Knight Humanities Building . Brigham Young University. P.O. Box 26098 . Provo, Utah 84602-6098 . (801) 378-2837 . fax: (801) 378-4649. email: SPSEC@JKHBHRC.BYU.EDU. Programs and Degrees . ... —- [626] http://humanities.byu.edu/SpanPort/spp.htm (5K)*

- *Yahoo - Humanities:Human Languages and Linguistics:Spanish [Yahoo | Up | Search | Suggest | Add | Help]. Humanities: Human Languages and Linguistics: Spanish. Academia Latinoamericana. Comp-jugador - Automatically conjugate Spanish verbs. It contains close to 10,000 different verbs. Elementary ... — [625] http://www.yahoo.com/Humanities/*

- *Human_Languages_and_Linguistics/Spanish/ (1K) Micro Media - Spanish Pronunciation Tutor Spanish Pronunciation Tuto/. The Learning Company/Hyperglot. $34.95. P2347 - Windows, Macintosh. Interactive Spanish Skill Builder - Beginner/Intermediate Level "... an extremely easy-to-use program*

that aims to teach the student ... — [624] http://micromedia.com/www/catalog /titles/pronun-s.htm (2K)

You may be wondering how to interpret this not entirely transparent result. The first hit will take you to Brigham Young University in Provo, Utah, to the Spanish and Portuguese Department. This is probably going to give you information about degrees in Spanish and Portuguese, but it probably will not give you too much about countries where those languages are spoken. Probably not a keeper, but it does have a rating of 626 out of 1,000, which is acceptable.

The next hit is for Yahoo, and the path is given—click on *Humanities*, then *Language*, then *Linguistics*, then *Spanish*—or to save time, click on the link that will take you directly to *Spanish*. From there, you can hotlink to several other Webpages of Spanish interest. At this site, you can conjugate 10,000 Spanish verbs using the "Comp-jugador"—computerized conjugator. Because in this lesson you are asking your students to learn a little about the Spanish language, this looks like a good hit. The hit has a rating of only 625, but for language-study purposes, a Comp-jugador is a fine idea—a prime example of the potential unreliability of the numerical ranking. The usefulness of something is up to the human mind, not a computer.

The third hit is for a "Spanish Pronunciation Tutor"—very useful to beginners. It says it is an "Interactive Spanish Skill Builder" for people at the beginner/intermediate level. This might be useful for the report, if the mechanism itself is any good. It has a rating of 624. This might be a keeper, but it looks like an ad for a software package rather than direct help from an Internet site. I'd want to check it out, but I'm not sure about it from the description.

I'll not bother to lead you through the other seven of my first 10 hits. If you do a NetSearch and InfoSeek for "Spanish," your results will be different from mine because I searched way back in August, 1995, and the Web has changed a lot since then.

In my InfoSeek search, there were three "possibles" and one "maybe" among the first 10 hits. So instead of going to all ten sites, I went to only four. When you and your students click on the hit, you can then determine whether it contains the information you seek. If it does, you've got another bookmark.

Be prepared for some interesting and not always helpful things to appear. For example, I searched for "Mexico," and "New Mexico" showed up. That source had a link to a home page called "Gay New Mexico." You will want to have played around with the Web yourself enough to be able to guide your students to the aspects of the Net that you want them to explore. To get InfoSeek information on Mexico, it is necessary to type "Old Mexico," but then the documents are in Spanish. Searching the

Internet takes a lot of problem-solving response, and that, of course, is one of the main cognitive and life-coping skills that we design to teach our kids.

Because I wanted more information, while still in Netscape's Net Search, I went to the Lycos Search Engine, the small catalog, and typed "Spanish." I got this result:

1081 documents matching at least one search term. Printing only the first 10 of 1081 documents with at least scores of 0.010.

Matching words (number of documents): spanish (1041), spanish1 (3), spanish2 (3), spanish3 (3), spanishamerican (1), spanishbarbs (1), spanishbook (2), spanishclass (1), spanishe (1), spanishfort (1), spanishgif (1), spanishhonor (4), spanishlanguage (1), spanishmap (1), spanishness (1), spanishoff (10), spanishold (1), spanishon (10), spanishport (1), spanishtecla (1), spanishtoizumi (1), spanishweb (3)

Lycos hits

Here is what the first three of the first ten of my 1,081 Lycos hits looked like:

#1. [score 1.0000]

http://www.willamette.edu:80/~tjones/Spanish/
last fetched: 28-May-95
bytes: 2625
links: 1
title: Index of /~tjones/Spanish/
outline: Index of /~tjones/Spanish/
keys: spanish
excerpt: Index of /~tjones/Spanish/ Name Last modified Size Description Parent Directory 25-May-95 14:30 - Spanish-main.html 09-May-95 18:27 2K Spanish1.ps 11-Oct-94 16:39 14K Spanish2.ps 11-Oct-94 16:40 51K Spanish3.ps 27-Oct-94 10:36 41K article.txt 28-Nov-94 23:04 1K graphics/ 10-Mar-95 11:09 - lesson1.html 28-Nov-94 22:52 9K lesson2-translations. 09-Aug-94 15:17 1K lesson2.html 04-Apr-95 15:52 21K lesson3-a.html 27-Oct-94 10:24 1K lesson3

#2. [score 0.4775]
http://www.willamette.edu/~tjones/Spanish/lesson1.html
last fetched: 27-May-95
file date: 09-Nov-94
bytes: 9427
links: 30
title: Weekly Spanish Lesson by Tyler Jones
outline: You too can learn Spanish!
keys: spanishold spanish

excerpt: *Weekly Spanish Lesson by Tyler Jones You too can learn Spanish! Disclaimer This page is being provided by me, Tyler Jones, to hopefully be of value to people using the Web. Approximately every week, this page will contain a new lesson, with new words. Old lessons will be available on the Previous Lessons Page . This page is only meant to be viewed through Mosaic, for Mac, Windows, or X. Foreign language characters will not show up correctly under a text-based viewer like Lynx. I'm still working this thing out, so the format may change in the future. Any comments, requests, or problems may be mailed to me, Tyler Jones, at tjones@willamette.edu. (FORM)Send a note to Tyler.*

Introduction My name
descriptions:
Lesson 1
Weekly Spanish Lesson by Tyler Jones

#3. [score 0.4539]
http://mac94.ralphbunche.rbs.edu/whatnew.html
last fetched: 20-Apr-95
bytes: 1712
links: 3
keys: spanishmap spanish

excerpt: *Talking Face (In Spanish). March & April Newspaper Our Recent Issue Of The Ralph Bunche Computer School Newspaper. January & February Newspaper Our past Issue Of The Ralph Bunche Computer School Newspaper. The Great Penny Toss Our 6th Graders Need Your Help. Class 414 New Jersey Penpals*

With nearly 1,100 hits, and only the first three of the first ten shown, you can see that you have found more than you can use. If you want more, click on "Next 10 Hits," and they will appear. This, moreover, was a search of the SMALL Lycos search engine. Imagine how many there might be if you were to use the LARGE Lycos search engine! You can, however, comfortably ignore most of the hundreds and hundreds (thousands?) of hits, if you know how to decipher especially the 1.0 to 0.1 rating

scores. In many systems, moreover, you can delimit the search, requesting the machine to present only the top x-number of hits, say, the top 25. This is what I mean by "information management"—it's your job as the teacher to help your students manage this embarrassment of information riches.

Instead of being rated from 0 to 1,000, Lycos hits are scored 1.0 to 0.1, which is the same idea. The first hit has a perfect rating of 1.000; it refers to the Tyler Jones home page that we already found in the InfoSeek search. This cross-reference is a bit of confirmation that this Website is probably a keeper. The second hit, also a Tyler Jones Website, looks like a keeper, too. You can click on the underlined URL and go directly to that Website. By reading the clearly marked Lycos hit, you can also see how large the site is (how many bytes), when it was last accessed, how many links it has to other pages, and a description of what is at the site. The next seven hits (not represented above) had ratings at quite a bit less than 1.000, and after that, less and less. To take a look at the next ten hits on this Lycos search, if you like, click on "Next 10." The rating drops to .3—not very promising.

I can't emphasize enough the importance of making bookmarks and, then, of organizing your bookmark collection in some easily accessible fashion. Save your search results so that you don't have to run a complete search the next time you are on the Internet. Save your results, also, so that you can know what you've already got: The Web is constantly changing; new Webpages are constantly being added. More static libraries change much more slowly than this. An Internet search is dynamic, and what you see is what you get, so you'd better keep what you get where you can see it: bookmarks!

There are other searches you can do. In the Internet Directory, you can do either a Yahoo Search or a WAIS (Wide Area Information Search) under "Reference," and discover the *CIA World Factbook*. The *CIA World Factbook* is mirrored at several sites, and, as of summer 1995, its editions range from 1990 to 1994. Find the most recent edition, if you can. Once you have gained access to the *Factbook*, you can see what the CIA has to say about "Mexico." By searching this way, you can also read the *World Factbook* on Mexico.

A WAIS search is a bit different from the others because it reads the "innards" of a document as opposed to the titles only, as the other searches do. WAIS searches will rank a document against your keyword, too, using a ranking or rating system similar to that of Lycos or InfoSeek. Also like both of those ranking systems, WAIS results are not always accurate. This computer-aided search and rank-order process is not yet Artificial Intelligence; it is pattern recognition, only—the computer is reporting with these ranked searches only a machine-readable similarity of character strings

("words"), not their conventional meanings. Meaning, in this human/machine interface, is still up to the humans, namely, you and your students.

If you think that you still don't have enough info on Spanish and Mexico, you might resort to our old search friend Veronica in GopherSpace. With relative ease, you can call up your Gopher, find Veronica or a file name preceded by Veronica's small square with a tell-tale "?" in it. This is your search engine, just like the other search engines. Click away, and when the dialogue box appears, if you key in "Spanish," everything you get will be in Spanish language—helpful, if you can read Spanish. Type in "Mexico," and the results will be an assortment of items in Spanish and English.

When I ran this Veronica search, I also got a ? that yielded what was titled a "List of all WAIS sources." WAIS, as explained above, searches documents from the inside out. I typed in "Spanish" and "Mexico," and I received many responses; however, none of these results yielded any new information that I had not found through the WWW searches using Netscape.

Also, while searching in Gopher, I ran across our other old search friend, Archie. I clicked on the first Archie I saw, typed in my two requests: "Spanish" and "Mexico," and again I received information similar to what I had received from the other sources. When you see that further searching is turning up no new information, you know that your search is at an end (until they add new Websites tomorrow or the next day!). At this point, I decided not to do a separate Archie search in Telnet. Enough is enough.

My initial searching complete, I was now ready to communicate with a real, live human being at some site in Mexico. In chapter 2, you got started with e-mail pen pals. You can use those same strategies in this lesson to communicate with a person who lives in the country you are studying. This is one of the very best ways—apart from going there in person—to learn about the customs and traditions of the country. Get a conversation going, if you can, between yourself and your class and someone in your selected country, preferably another school room full of kids like yours.

Don't forget, as great as the Internet is, you also still have all the good old resources available in the library. This is where your job as information manager comes in again, helping your students learn how to juggle their many kinds of information resources, collate and process them, balancing series of Internet links with books and other printed material, videos and audios, and who knows what else. The reports they prepare can also take many forms, but project summaries now must inevitably include a process report to the teacher and to fellow students on how the Internet was used and a bibliography of hotlinks.

CHAPTER 16

VIRTUALLY TOGETHER IN D.C.

In elementary, middle, and high schools, students in the U.S. study American government. Many schools sponsor trips to Washington, D.C., every year for selected 5th-graders, 8th-graders, and 11th-graders. Before your students take the actual trip to Washington, however, I suggest that you and they go on a *virtual* tour of the city ahead of time.

The Internet sources that make a virtual trip possible will also make Washington more interesting when your students do arrive there actually. The following electronic tourguide to D.C., will not only prepare the lucky ones who get to go on the trip across physical geography but also it will let the less lucky stay-at-homes know what they are missing by not getting to visit the capital city.

IN YOUR CLASSROOM:

A virtual tour of Washington, D.C.

The first time I visited Washington, D.C., I made a startling discovery: The White House and the Capitol are two different buildings in two different locations. What a surprise! In my mind, somehow, despite all those news broadcasts talking about what the President had said at "the White House" as opposed to what Congress had done "on the Hill," the two had coalesced in my mind. Fortunately for American government and us the people, the checks-and-balances system is better defined in the Constitution than it was in the ill-informed geography of this kid's mind!

With this lesson, you can familiarize your students with the map of Washington, D.C., as well as with the significance of many of the beautiful buildings, monuments, and other landmarks that make Washington the living, open, history book of America that it is—and you can help them be a little less o.t.l. than I was.

Goal

To give students a better understanding of the geographic layout and historically specific composition of our nation's capital, Washington, D.C., by taking a virtual tour of the federal area and other points of interest. To help them understand government better by understanding the real-estate of government. To get them ready and eager to go to Washington.

Rationale

Washington, D.C., is the seat of the American national government. When students know the lay of the land and the significance of the various official edifices, they tend to develop a better understanding of our country, our government, and our representative democracy. Beginning with this geography of government, they can move on to learn more about how American government works.

Objectives

Internet: Take a virtual tour of the Federal Area of the nation's capital using Gopher, Netscape, telnet, and ftp.

Cartography: Locate Washington, D.C., on a map of the U.S.A. Show where the White House, the Capitol (where the Congress meets), and the Supreme Court are located. Determine and map the best route to the Smithsonian Institution from a starting point in Baltimore, Maryland, or from Dulles Airport in Virginia. Determine ten places that seem important to visit in Washington, D.C. Draw a personal tour-map of Washington, D.C., describing the tour that the cartographer would like to take.

Historic meaning: Take a virtual tour of points of interest in the city, including the White House, the Supreme Court, the Congress, the Smithsonian Institution, the Treasury, the Library of Congress, and other important institutions in the city. Discover the significance of the Lincoln Monument, the Washington Monument, the Jefferson Memorial, the Vietnam Memorial, and other monuments and memorials in the city. Explain the differences in each of these public edifices, what they stand for, what takes place at each site, and their meaning for America. Select three or five or more "most significant" points/monuments/buildings in the city and tell and write about their historical significance for the nation and the individual. Design a new monument for the the District of Columbia, stating its significance: "Using your map

and the computer, take your friends on your virtual tour of Washington, D.C., including a visit to the monument that you designed."

Procedures

Set the stage by telling your class that they are going on a trip to Washington, D.C. Say that this trip will be a *virtual* tour, but that it will prepare them for an actual tour, some day. Give them some background about the nation's capital city. This project may take a lot of preparation time, especially if you are going to escort your students on an actual trip to the Capital. This virtual tour before you start down the path to gathering travel brochures, maps, and tourguides, and the expensive proposition of making overnight reservations, will prepare you for efficient use of time and money with the knowledge of what you are going to be doing and seeing.

Evaluation

By the end of the virtual tour of Washington, D.C., your students will be familiar with the important buildings and monuments in the city. They need to have an idea not only about historic monuments but also about the Metro System and how to use it. Expect your students to be able to describe the various monuments and tell their significance as well as to describe some of the exhibits at the Library of Congress and the Smithsonian. Resourceful students with an interest in gardening may even be able to tell something about the national arboretum; students with an eye for art will be able to describe the National Gallery; and—properly challenged—other students will find other sites of special interest to themselves.

One of your goals is to excite your students with a virtual visit to Washington so that they will develop a clear idea of what sites they most would like to see during an actual visit in D.C. If they have fun surfing the virtual D.C., they will learn more about it than they would do, were it to seem like mere duty or "just another lesson."

Getting started in D.C.

The Washington, D.C., Visitor's Guide
http://www.clark. Net:80/pub/jridgely/dc/dcguide.html

A good place to start because it has many hotlinks to other virtual spots in D.C.

Travel to and in Washington, D.C.
http://www.si.edu/welcome/planvis/travel.htm

Travel on the Metro System in D.C.—**http://metro.jussieu.fr:10001/bin/select/english/usa/washington**

Includes location of stations and travel times between stations. You'll need a map of the city for the information at this site to make sense. (I've lived in D.C. and it does make sense, but not without additional information.)

Cheap and Safe D.C.
http://www.cais.com/npacheco/dc/dcfree.html

A slightly sarcastic visitor's guide on the WWW, both tongue-in-cheek and informative. (I couldn't resist!)

The President's house

When you get to Washington, whether actually or virtually, one place that is a must to visit is the Executive Mansion.

For a collection of photographs related to the White House and the Clinton Administration:

University of North Carolina

Gopher: **calypso.oit.unc.edu**

Choose: *Worlds of SunSITE—by Subject/US and World Politics/Multimedia (White House Pictures)*

The White House
http://www.whitehouse.gov

A virtual tour on which you can see pictures of the First Family: President Bill Clinton; the First Lady, Hillary Rodham Clinton; "First Kid" Chelsea; and "First Cat" Socks. You can also get information here about Vice President Al Gore and his family.

Old Executive Office Building
http://www.whitehouse.gov/White_House/Tours/OEOB/

Holds much of historical interest.

The White House Collection of American Crafts
http://www.nmaa.si.edu/whc/whcmainpagetext.html
(or access via mirror site: The White House homepage, as above).

The Department of State
http://dosfan.lib.uic.edu/DOStour.html
See the formal reception rooms.

White House Press Releases
Anonymous ftp: **ftp.spies.com**

Path: */Clinton*

or subscribe to receive daily White House Press releases via e-mail:
almanac@esusda.gov

Presidential papers and other details about the White House can be found at three Gopher sites:

(1) Texas A & M University

Gopher: **gopher.tamu.edu**

Choose: *Hot Topics: What's New & Popular/A&M's Most Popular Items/White House Information*

(2) *Whole Earth Lectronic Link*

Gopher: **gopher.well.sf.ca.us**

Choose: *Politics/The White House Information Archive*

(3) University of North Carolina

Gopher: **sunsite.unc.edu**

Choose: *Worlds of Sun?!TE—by Subject/US and World Politics/Sunsite Political Science Archives/whitehouse-papers*

or access via mirror site: **http://sunsite.unc.edu/white-house/white-house.html**

The other unavoidable house to visit is the one with the big dome up on Capitol Hill, the United States Congress. In planning an actual visit to Washington, D.C., e-mail your Senators and Congresspeople, telling them of the dates you will be in the city. Congressional staff members will respond via snailmail with tickets to the House or Senate galleries and maybe even tickets for an actual White House tour. To get addresses of individual people in Congress, gopher to the last address in Browser's next box:

The Congress

Thomas (named for Thomas Jefferson)
http://thomas.loc.gov

An excellent source for everything about the Senate and House of Representatives, the *Congressional Record*, important speeches from the last two congresses (103rd and 104th), as well as information on how the legislative branch of government works. I've already mentioned *Thomas* in chapter 13, but it's well worth another mention in a chapter on D.C., and it's worth a bookmark, too.

CapWeb is another guide to the U.S. Congress.
http://policy.net/capweb/congress.html

Find out what committees your Congress people are working on at this site:

University of Michigan

Gopher: **gopher.lib.umich.edu**

Choose: *Social Science Resources/Govt and Politics/US Govt Resources: Legislative/US Congress: Committee Assignments*

Visit your own Congressional Representative and Senators, and find out how to send them e-mail, by using the following address:

Library of Congress

Gopher: **marvel.loc.gov**

Choose: *U.S. Congress/Congressional Directories*

Washington is much more than the President and the Congress.

Other Departments of Government
http://www.law.cornell.edu/supct/justices/fullcourt.html

See pictures of the nine Supreme Court Justices.

The Treasury Department
http://www.ustreas.gov/treasury/homepage.html

Among other things, see money being printed.

The Federal Bureau of Investigation
http://www.fbi.gov/

Among other things, find out about job opportunities with the FBI.

The Department of Justice
http://www.usdoj.gov/

Among other things to do at this site, meet Janet Reno, our first woman Attorney General. This page has a link to other federal government links, including the Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, HUD, Interior, State, Transportation, Veteran Affairs, and Education. Go directly to **http://www.usdoj.gov/other-link.html** for this set of links to almost every department of government.

LOC and the Smithsonian

The cultural life of Washington is rich—museums, scientific institutions, art galleries, libraries, and more. D.C. is a showplace to the world of the best that America has to offer. (D.C. is also a showplace to the world of some of the worst things about America—poverty, crime, urban crowding, racism, classism—but that is a topic more difficult to visit via the Internet. Poor people do not yet make much use of the WWW because computers and their peripherals are expensive.)

Take a virtual tour of the Library of Congress to see if you can view copies of everything published in the United States. You probably cannot, yet, but plans are afoot eventually to put the full text of every book in the LOC online. Meanwhile, many other discoveries are possible at LOC and Smithsonian sites:

Gopher or telnet or Websurf to the Library of Congress:

Gopher: **marvel.loc.gov**

Telnet: **locis.loc.gov**

WWW to this URL: **http://www.loc.gov/**

American Special Collections at the Library of Congress
http://lcweb.loc.gov/spcoll/full.html

The Library of Congress Cultural Exhibits
http://lcweb.loc.gov/homepage/events.html

The Smithsonian Institution
http://www.si.edu/

With links to several other Smithsonian Institution sites, almost all with great pictures; don't forget to visit the Air and Space Museum while you are at this location.

The Smithsonian Gem and Mineral Collection
http://galaxy.einet. Net/images/gems/gems-icons.html

Truly spectacular. See the Hope Diamond as well as other less notorious gems.

The Smithsonian Natural History Museum

Gopher: **nmnhgoph.si.edu** —see the huge elephant!

Only 3% of the Smithsonian's collection is on display at any given time. See photographs of items not on display at *The Pipeline Gopher*:

Gopher: *gopher.nyc.pipeline.com*

Choose: *Arts and Leisure/Smithsonian photographs and viewing software*

The National Arboretum

The Smithsonian Botany

Gopher: **nmnhgoph.si.edu**

Choose: *Botany at the Smithsonian Institution*

U.S. Military Academy

Gopher: **gopher.usma.edu**

Choose: *Reference=ADSection/Other Neat Stuff/*

Monuments and famous people

Washington, D.C., is itself a monument to American democracy, and it is a city of landmarks—houses and buildings as well as the public monuments—that commemorate famous people and significant events in the history of the nation. A virtual tour of Washington is an ideal way to become acquainted with the monuments of D.C.

The Monuments of Washington
http://www.co.arlington.va.us/museums.html

The Famous Houses of Washington
http://www.co.arlington.va.us/houses.html

The last time I tried these sites, in August, 1995, the machine told me that they were "empty." It's hot in Washington in August; maybe everyone was on vacation and no one was minding the store. Check them out anyway; I'm pretty sure that Washington hasn't gone out of business, yet. Foreboding and forbidding messages on the Internet are not necessarily final.

The first chapter of a book on Abraham Lincoln can be found at this URL:

http://dab.psi.Net/ChapterOne/children/browse/lincoln.html

You and your students will find very many more Internet sites on Washington than Browser has sniffed out for you, and each year that you teach this lesson, you will find that yet more sites will have been put on the Internet. Websurfing is fast becoming a standard activity of people engaged in serious lifelong learning.

To go along with what you can discover via the Internet, use other electronic library resources that are available, such as Encarta, a CD-ROM program with a lot of great information about Washington, D.C.

What it means to me

For a culminating activity, have each of your students, either individually or in groups, select the three or five or more (a number suitable to you and to them) "favorite places" they want to visit in Washington, D.C. Have them design a quick virtual tour for their classmates, showing and explaining the places they want to visit, and telling why those places are significant to them and to the country. If each group in your class selects three different sites, they will have organized a thorough virtual tour of the city that will get them all ready for the actual tour-to-come.

For a thought-provoking, highly meaningful capstone on this project, propose that each student design his or her own D.C. monument, draw a sketch of it, and be

ready to explain the following to the class: What it would look like. What it is. Where it would be in D.C. What it means.

The results of this exercise might make an interesting contribution to the Web via your class homepage (see chapter 18): "Our Class's New and Improved Washington."

Other tours

After your students have taken a virtual tour of the Capital, they will be ready to learn more about the workings of the American government. You can develop that lesson yourself by using Net Search, browsing on some of the following key words: Government, Legislative Branch, Executive Branch, Judicial Branch, Senate Hearings, Government Documents, Declaration of Independence, Constitution, Amendments, *et alia*.

If you and your students would like to take a virtual tour of another or a different city, click on Net DIRECTORY in Netscape. Scroll down until you see and click on: "Virtual City Tours." By the way, I did not use that resource to design this lesson because I wanted to make this lesson up to suit myself. You can use "Virtual City Tours" to supplement this virtual tour of Washington, D.C., or to design virtual tours of other cities, or you, too, can make up a tour of the city of your choice to suit yourself by using search engines such as Archie for ftp archives, Veronica in Gopher, and any of the search engines in Netscape. If the place where you live is not represented in the "Virtual City Tours," making up such a tour of your city or town or region would be a wonderfully challenging class project and would look great on your class homepage (see chapter 18).

"The world is your oyster," as the saying goes, and you now have it and many of its cities caught in your Net.

CHAPTER 17

THE GAMES PEOPLE PLAY

Here it is—computer games on the Internet! Just what you've been waiting for! You were probably already thinking that your kids spend too much time playing video games, and that if they would only invest some of that time in studying, they would corner the market of electronic knowledge.

Face it! Kids play. Play is kids' work, so why not show them some good, clean, healthy electronic playgrounds on the Net? That, alas, is easier said than done. All kinds of games on the Internet are available to everyone, so even games that may, at first blush, look like they're OK for kids, will eventually cause a lot of blushing. The Internet is the world, and, as the saying goes, "it takes all kinds." "Adult" players are playing some very "adult" games on the Net, if semi-public preoccupation with bodily functions can be considered "adult."

As with video games at the mall, some of the games on the Net are barbarously violent and gory, some are too sexually explicit, some are filled with language that is too profane for the classroom. A few sites rely on gambling skills: You can play a virtual slot machine, poker, and blackjack on the Net. You can also test your knowledge of beer trivia and take a short course in wine savvy, and—with a credit-card number—you can place your order for both items, something that is illegal for K-12 in most States. Browser growls at all of this!

Another drawback to the comprehensive game lists is their sheer size. One list involves you in downloading a file that is 50K long, and that takes time. Because the

list is popular, moreover, the site is often busy, and if it's not busy when you start, it gets busy while you are downloading it, so that you do not get all of it.

If you do not want your kids visiting these Websites, then you will not want to put a general games list in your bookmark collection. You will want to be more selective, steering your kids away from the games of which you disapprove by steering them towards the games that you do approve.

Our role as teachers is threefold: (1) Establish standards that we think are appropriate for our classrooms (and school and community), (2) check out the Internet sites to make sure that they meet our standards, and (3) uphold our standards with our kids, engaging them in whatever discussion is necessary and helpful to cause them to mature in their understanding of tasteful discrimination, morality, and character, and being able to tell the difference between what is appropriate and what is inappropriate and why.

This might be the time to talk about "SmutBlockers" and Acceptable Use Policies or AUPs. So-called "SmutBlockers" are being developed, much like the currently much-touted V Chip (anti-violence chip) for television, that will block objectionable sites on the Net. America OnLine already has a blocker program for subscribers, and AOL is developing a commercial program for sale outside of AOL and for use in the Windows environments. *SurfWatch* is a current and popular commercial software program on the market.

Even with technological protection in place, a reasonable AUP is still necessary—a fair understanding among all stakeholders. An AUP is a policy that your school or district constructs to outline the guidelines to be followed regarding the use of the Net. No guarantees are possible that materials accessed on the Net will be completely free of violence, pornography, questionable language, etc., but with an AUP in place, educators can reassure parents that the school is doing the best job it can to see that the children are getting the "best of the Net." AUPs are usually in the form of a written agreement that is signed by students, parents, and teachers—a three-way pact for the best use of the Net at school. An AUP outlines the acceptable uses, rules of online conduct, and Net access privileges. This approach makes clear to students that their use of the Internet is a privilege, not a right, and one that can be denied when it is abused. A well-crafted AUP, further, includes stated, written penalties for violations of the policies. The AUP is kept on file at the school and is considered to be a legally binding document.

Any type of legal, binding document is difficult to write from scratch, especially by non-lawyers. Here's where the Internet itself can help you. You can find samples of AUPs from across the county at two GopherSpace sites, one at ERIC, the other at

Rice University. The sample AUPs at these sites will be of great assistance as you write your own AUP.

Get help with your AUP

ERIC

Gopher: **ericir.syr.edu**

Choose: *Internet Guides & Directories/Acceptable Use Policies/Agreement for K-12*

Rice University

Gopher: **riceinfo.rice.edu**

Choose: *Information by Subject Area/Education,Acceptable and Unacceptable Uses of Net Resources (K12)*

On your mark, get set, play!

Go ahead and look at a general games list so that you can be knowledgeable about what's out there. Have some fun yourself! Then glean from the general list the games that you think will be interesting for your class. Build your own selected games list for availability to your class on your bookmark collection. Browser loves games, and in his box he has Netted you more games than you and your students will ever be able to play (or, in some cases, want to).

Lotsa lotsa games

Zarf's List of Interactive Web Games

http://www.cs.cmu.edu/afs/andrew/org/kgb/www/zarf/games.html

An awesomely huge list of games. If your computer does not have a lot of RAM, you might never be able to download the whole list. I have 10 megs of RAM and I've been able to download the whole list only when I start up my Netscape program. Otherwise, I get only a portion of the list. In addition to this word of warning, the site is busy. Zarf does include some useful hotlinks to other game sites.

Games Domain

http://wcl-rs.bham.ac.uk/GamesDomain/whatsnew.html

Lists games to be played on the Web and that can be downloaded for play, and it is regularly updated. A list of ftp sites for freeware and shareware games for all types of computers (Macintosh, PC, Unix, Amiga, etc.) is all-inclusive.

According to Howard Gardner, among the seven "frames of mind" are the logical-mathematical and the bodily-kinesthetic, and both of these "intelligences" love games, mind games and physical games, respectively. Just because something on the Web or in school is not about readin', 'ritin', and 'rithmetic, does not mean that it is not educational or that it is not essential to the development of one of the frames of mind hard-wired in our brains. The "literate frame of mind," which most educators favor, is neither the only nor the most important intelligence. What's the moral of this little homily? Don't be stingy with computer time for kids who like games!

Downloading games is a better use of Net time than is playing games on the Net. For this reason, I recommend the list of ftp sites at *Games Domain*. Your students can get lots of practice downloading a game and getting it formatted for use on the computers in your classroom. By getting good at downloading games—something they WANT to do, they will gain the skills needed to download other types of programs.

For a nice easy game of *Tic-Tac-Toe*, visit this URL:

http://linex.com/~donham/ttt.html

There are three modes of play: very easy, easy, and hard. You can choose to be either the X or the O. An excellent game of strategy, and your kids do have to think to make T-T-T work.

A more difficult version of *Tic-Tac-Toe* is the three-dimensional variety, which you can find at this URL:

http://www.hepl.phys.nagoya-u.ac.jp/cgi-bin/3dttt

This address offers no directions for getting the game to start, but it's easy: point-and-click, and it will go; then wait for the computer to make a move, and then point-and-click again. The x's and o's will appear magically on the screen before you. The game keeps a winner's list of the names of people who have been successful at it.

The Peg Game
http://www.bu.edu/htbin/pegs

Pits the player against a computer to get the most spots. Good luck! This one's tricky.

Webtris
http://inferno.cs.bris.ac.uk/gid-cgi-bin/twebtris

An interactive form of *Tetris*, the game familiar in a computer games package, comes to you from a Bristol, England, URL. *Tetris/Webtris* takes up lots of time and does not seem to teach much of anything beyond skill at putting objects

into slots. Nevertheless, this game may have a socially redeeming factor: It teaches spatial awareness, the knack we need for the creative cramming of storage drawers and small refrigerators and moving vans. When my nephew moved to a new apartment, he said that *Tetris* had really helped him pack the trailer because he could visualize better how the chairs looked, turned upside down and backwards.

Another strategy game is "Battleship" which can be played on the Net if you have good graphics. If not, then it takes too long to load the images. I'm not clear why someone would bother to play this game on the Net, for it is so easily played using a 10x10 graph paper grid. Anyway, you can find "Battleship" at this URL:

http://csugrad.cs.vt.edu/htbin/battleship?/

Word games are more the cup-o'-tea of people with literate frames of mind. *CyberSight*'s "Hangman" can be found on the WWW at this URL:

http://cybersight.com/cgi-bin/cs/hangman?+ leqht|0|| (What an URL!)

While I prefer shareware versions of the game better than this one because they give me some control over the words, this one is all right.

Chess games abound on the Net, and *Gnuchess*—

http://www.delorie.com/game-room/chess/

—(another Top 5% Award winner) may be the one to try first. It's got a graphical board and a timer that allows you to set the length of the game from 1 minute to 10 hours, but there's a catch: It will only save a game for three hours before it is erased. That's a lot of online time (especially if you're paying for it), and it's much more time than you will be willing to spend in class (unless you're the coach of the school chess team).

If you want to download games for uploading to your own or the class computer, one site on the Internet lists 609 addresses of sites where you can find downloadable games. Needless to say, I have not checked out each of the sites, and the couple that I did check out were busy. A lot of people are looking for freeware and shareware games. Check out this megapage on the WWW at this URL:

nttp://happypuppy.com/games/lordsoth/index.html

—but I do want to register my disclaimer: When you find something offensive (as assuredly you will do), don't blame me: My constant advice is the old saying, "Pick the roses and leave the thorns."

20 Questions on the Net

The Net is full of games, but you can also devise your own games by using the resources on the Net. You can develop games for your class to play based on television shows such as "Jeopardy" or "Wheel of Fortune." You can develop games based on popular board games such as "Trivial Pursuit" or "Monopoly." You can also invent computer-aided games based on tried-and-true classroom games that have been used for eons. For example, play "Megapage: 20 Questions."

A megapage—as we discussed in chapter 4—is a page at a Website with lots of hotlinks to lots of other pages. You can find megapages on just about any subject you can think of. Use your Net browser—InfoSeek is a good one for this purpose—to find megapages in your subject area or field of interest.

"Megapage: 20 Questions"—as I conceive it—has two parts: First, the player has to find the right megapage, and second, the player has to answer the 20 questions by hotlinking from the megapage to other pages. Here's a "Megapage: 20 Questions" that I invented, but that Browser hates.

Megapage: 20 Questions: "Cats"

A. Find a megapage on "cats."

B. Answer these 20 Questions about Cats by hotlinking to other pages. Bookmark the URLs to prove that you found the other pages.

1. What is another name for an Angora cat?
2. Where are Angora cats found?
3. Who is Socks?
4. When is a cat given the title GC?
5. Why do people like cats?
6. How old should a cat be in order to be adopted?
7. How much does it cost to subscribe to the *Cat Fanciers* list?
8. How many common cat colors are there? List them.
9. Compare a Japanese Bobtail to a Manx.
10. Contrast a Himalayan with a Siamese.
11. Analyze the qualities of Balinese cats
12. Draw a cat.
13. Judge the coolest cat and explain your decision.
14. Define "cat."
15. List five properties of a Manx cat.
16. Write a poem about a pet cat.
17. Think up a new reason for having a cat.
18. If your cat were pink, how would it react?
19. Describe how a cat accesses the Internet.
20. If you wanted to give a kitten to someone special, how would you wrap it up?

The answer to question A is this URL:

http://netvet.wustl.edu/cats.html

The answers to most of the 20 questions can be found at that one location with a bit of surfing. Questions 16-20 require some imagination. The first time you play a 20-questions game on the Net with your kids, model answering some questions—show them how it's done. Then make the questions as easy or as hard as is advisable for the age, the learning level of your students, and their degree of surfing ability at the Web.

After they get the hang of it, divide your class into teams, assign them to make up games for one another, and let the teams play against one another, each trying to make their game harder than the others. With this approach, they learn both while they are inventing the game and when they play it. Count points for getting answers right, but also count points off against a team that devises a game if they send the other team to a wrong address or off on a wild-goose chase or ask a question that is unanswerable from the megapage they chose.

Browser has found some megapages that would make great "Megapage: 20 Questions" game starters, preferable, he thinks, to the one above.

The CIA Factbook for 1994
http://www.odci.gov/94fact/fb94toc/fb94toc.html
Links to over 160 countries and has information on many topics, from population to economy and everything in between.

The American Civil War Homepage
http://cobweb.utcc.utk.edu/~hoemann/warweb.html#general

The Shoemaker-Levy Comet (collision with Jupiter)
http://NewProducts.jpl.nasa.gov:80/sl9/
(Let Browser sniff out all the NASA pages for you—they're spectacular!)

Easy stuff

A simpler, easier computer-aided game that you can play with your students using the Internet is "Hunt and Peck." Download a short story or poem from the Net (or require the game-player to download the file), put it in a file with a number of questions about the text, and require that the game-player make specific word-processing moves while answering each question. For this purpose, you can find short stories and other pieces on the Net at several URLs. Otherwise, use Gopher, do a Veronica search on short stories, and see what happens.

Hunt and Peck: Jabberwocky on the Web

I've always loved the imagery in "Jabberwocky," by Lewis Carroll. The wonderfully nonsensical poem can be found on the WWW (via Gopher) at this URL:

gopher://english.hss.cmu.edu/0F-2%3A5287%3ACarroll-Jabberwocky

Here is a game of "Hunt and Peck" that I devised for "Jabberwocky."

A. Find "Jabberwocky," by Lewis Carroll, on the Web.

B. Download the poem and put it in the file with the following questions.

C. Answer the following questions based on "Jabberwocky," making the word-processing moves indicated with each question.

1. Draw a Jabberwock
2. Invent a new word for the Jabberwock to do.
3. Describe a slivvy. Would you want one? Argue your case.
4. Describe another non-dictionary word in the poem. Why would you not want one? Argue your case.
5. Why should you beware the bandersnatch?

Yuck it up!

Jokes and other funnies are out there on Webpages and in GopherSpace. If you like spoonerisms, for example, there's *Drindercella*—

http://www.anders.com/grampy/drindercella.html

For a new light-bulb joke ("How many *whatevers* does it take to screw in a light bulb?") every nine seconds, check out

http://shimmer.dcs.warwick.ac.uk:8008/cgi-bin/random_light_bulb.cgi

(This site is set up for Netscape 1.1, so good luck with anything less than that).

Murphy's Law and its derivatives can be found on the *Terrible Truths* page—

http://www.indirect.com/www/nunley/bone/lists/truths.html

Even though it's not a joke, it is a lot of fun for kids to see their names translated into Hawaiian. Say aloha! at

http://hisurf.aloha.com/Find.html

Your class may not yet have its own home page, but a number of comic-book characters have theirs. For example, *The Calvin and Hobbes Archive*—

http://www.eng.hawaii.edu/Contribs/justin/Archive/Index.html

—is a great place to visit to find out everything there is to know about Calvin and his pet stuffed tiger, Hobbes.

You can find illustrated, fun stories that kids can read on their own, together, with you, or especially with their parents at this URL:

http://www.indiana.edu/~eric_rec/fl/ras.html

While I was writing this book, I searched and searched for Webpages that specialized in "good clean jokes" for kids, but I found none such. I think it would make a great project for your class, when you set up your own home page (see chapter 18), to publish out there on the Web: "The Home page for 5th-grade Jokes" (or whatever grade you teach). It would be a project by kids and for kids, with kids from all around the world sending in their jokes. Your kids could moderate the collection, making sure that the jokes were funny, made sense, and were in good taste. If this idea catches on, we'll soon have joke pages K-12 on the Internet—what a blast!

Games and jokes—let them have their place in your online classroom! They serve more purposes than merely diversion or comic relief or relaxation or reward. Games teach us to be logical and precise and strategic in our thinking. Because many (not all!) of your kids enjoy games, they will learn a lot as they devise their own games. Games can serve to reinforce skills and knowledges that you have been teaching. Maybe that's the best part—the kids learn, have fun while they're learning, and don't even notice that they are learning. That's winning the best game of all, the Teacher Game!

CHAPTER 18

HTML AND YOU

You and your students can learn to write HTML (HyperText Markup Language) so that you can publish your own individual home pages, a home page for your class, and a home page for your school. Yes, it's a computer language with special codes, but also yes, it's easy and—some would say—fun!

If you are on a system that supports home page construction, all you need to get started is a list of the fairly simple HTML codes and any word processor or text editor. HTML uses embedded codes, tags placed inside of text to mark graphical elements, hotlinks, and typographic particulars. These codes are produced simply from your computer keyboard. HTML is growing and changing. While this book was being written, I noticed that some of the best books on HTML in the bookstores had become out-of-date. Teaching with the ever-expanding Web means that you have to run just to keep in place!

HTML is a bookend code. If you want your books to stand up on the shelf, you need a bookend at the left and right ends of the row of books. The same with HTML: You need a tag at the beginning and end of any string of code. Angled brackets < > at the beginning say, "Code starts here." Angled brackets with forward slash </ > say, "Code ends here." For example, the tag causes text to be presented in bold letters. "b" for "bold" inside the angled brackets indicates an HTML coded command: "This is a code command: Turn on b for Bold!" When you get to the end of the word or phrase that you want bolded, you key in which tells the machine: "This is a code command: Turn off b for Bold!" Only one command in HTML is not a bookend command, the code that indicates a paragraph break <p>.

HTML consists of many such tags: tags for headlines, tags for underlining, tags for italics, tags for titles, and tags for paragraph breaks, but don't be overwhelmed by all the tags! Most of the tags are alliterative, such as "b for bold" or "i for italics." After you've coded your first home page, your fingertips will have memorized most of the tags. Netscape supports tags that allow you to set up tables, customize backgrounds, and a few other nifty things, but the problem with HTML is that it is too simple a machine language, not too complex. If you're accustomed to setting type and desktop-publishing programs, you will find HTML and its quite limited range of typographic possibilities rather clunky.

Choose the "Help/How to Create Web Services" menu item for links to online HTML tutorials. Consult Netscape's on-line pages to learn how to take advantage of these features. You can also get an HTML guidebook in a bookstore or at the library. (See below for some suggested titles and URLs.)

One feature you'll certainly be using is the HTML hotlink. When you are setting up your own home page or megapage, you will want to list URLs and addresses all over the place to which you can go in a flash by hitting a hotlink on your Webpage. Here's a sample of HTML code that puts a link in place for users to click on:

```
<A HREF="http://home.netscape.com/index.html">Home</A>
```

The first thing you spot is the angled bracket < at the beginning that announces the start of an HTML coded command to be embedded in your text. Look at the end of the string and you see the other half of the pair of angled brackets with the forward slash **/A>**, indicating the end thereof. "**A**" is for "anchor," **HREF** stands for hotlink reference, and = means "equals." It's an anchor because you're going to fix something here—like anchoring a boat, and the = sign tells you what is being anchored. The part of the tag between quotation marks "**http:...html**" is the URL of the Webpage to which your readers will go when they click on that link. The text following the URL contains the highlighted text **>Home<** that the user sees on screen. Note that the angled brackets are used again as part of the tag code, but, this time, they are reversed.

The code to insert images in your pages is similar to the code that commands a link to be inserted. Online images are links to image files, so instead of inserting a document that has .html at the end of the URL, it will have the abbreviation for the type of graphics file it is. These abbreviations are .gif, .tif, .jpeg, .mpeg. Most recent computers have image-reading programs that support these image files, so when you put in an image, write the following tag:

```
<A HREF="http://egc.gif">Picture of Eileen/A>.
```

Can you decode that tag? <A is the opening anchor, HREF= is the name of the file, the name of the file is "http://egc.gif", > marks the end of the file, "Picture of Eileen" is the title that will show up on the Netscape screen, and /A> ends the anchor. If you got all of that, you are on your way to becoming an HTML programmer. Congratulations!

To see the HTML source code that controls anyone's Webpage, choose the View/Source menu item. "This command displays the text and tags used to create the content and content style of the current page." —quote, unquote the Netscape *Handbook*. If you have already coded a home page, this sentence will be meaningful to you; if you have only looked at home pages, it's like reading a foreign language. Don't let the techie jargon scare you into thinking that you cannot design and execute your own home page! If you have surfed the Web only a little bit—especially in regions where educators roam—you will probably have seen home pages written by five-year-olds, and you will certainly have seen home pages put up on the Web by elementary-school kids. If kids can do it, you can do it! You do not need to be a computer programmer to develop a home page; you need only know what you want your home page to say, time to hunt and peck, and patience.

This chapter tells you everything you need to get started, and if you get stuck, ask the kids in your class to help you out. If you are completely baffled, there is even a home page on the Internet that will put your information in code for you. It will take a couple of days for you to get the return copy, but if you are interested, see

http://www.wizard.com/~fifi/pagemake.html

IN YOUR CLASSROOM:

How to build your own home page

Goal

To design, code, and upload a home page with your students for your class.

Rationale

You want the world (wide Web) to know what you are doing, and a home page is your window on the world: Your class looks out, and the world looks in. You also want to reinforce skills in drawing, writing, proofreading, and collaborating, and instruct in the relatively new skill of computer programming in the machine-readable code language, HTML.

Objectives

Develop a home page message that is meaningful as a representation of your class to people who will meet you through it on the Internet. Develop expertise in collecting, organizing and writing data, both textual and graphical. Develop expertise in using HTML. Develop expertise in producing and maintaining a home page with selected links. Develop strategies for working together.

Procedures

Designing your own home page is an excellent project for your class (or school) after everyone interested has been online for a while. When your students know a little about surfing and the types of information that are out there on the Web, they will probably have ideas for their own home page(s). Set the stage by telling your class that they can develop a short home page and put in on Wentworth's server, but that to do this, Wentworth requires that they have a clear message and a reasonable reason for using the space—the more focused, the better; the more imaginative, the better.

At this point, brainstorm with your students to come up with the best reason and message for your class. One 4th-grade class has an interactive creative-writing project through which they are communicating with people all over the world. Another class is doing a global weather survey. Yet another is communicating the results of a scientific experiment that is being done in several classrooms across the United States, the United Kingdom, and New Zealand. Only the scope of your own imagination and your students' imaginations constrains the boundaries of your possibilities.

Spark your students to find several good examples of home pages written by classes that are similar to yours in terms of grade level or subject, and see what your electronic neighbors have been doing. Talk over together what makes an excellent home page, a so-so home page, and a duh home page. Look for home pages that are elegant yet simple, that show a range of information links from simple to complex, and that have a clear and appealing purpose and message.

Brainstorm with your class what they would like to see on their own home page. Revisit the issue of what your class's reason is for having a home page and what you want your message to be. Generate a list of ideas for contents—here's a starter list:

- student stories
- interactive stories (stories that are being written online in concert with other kids in other places)

- your class or school newspaper (you may want to include the class news digest that you are developing according to chapter 13)
- pictures made by students
- collaborative projects with other classes at your school or with other schools
- a list of your e-mail addresses and an invitation to keypals
- biographical sketches and photos of the people in your class
- favorite areas of study and hobbies with individual comments and questions
- science projects
- information and news about where you live, and maybe a virtual tour guide about the notable and scenic spots in your locality (like the one suggested at the end of chapter 16)
- pictures of everything you talk about
- audio clips and video footage (if you have the technical capacity)
- and oh! so much more

When you publish your own and your students' e-mail addresses to the world, realize that you are inviting yourself to be flooded with messages. Make sure that you are prepared for the traffic. If you are ambitious, lead your class to become the force that organizes a home page for your entire school. (In that case, your class home page will be a link on your school home page.) To involve other classes and even the principal means that your class may have to accept the responsibility of teaching other people about the Internet. Think through the implications of this undertaking and talk it over thoroughly with all the major players. This is a Big Project.

After the brainstorming, it's time to prioritize and develop an outline of your proposed home page before you start committing it to writing, and long before you start coding it. Without this outline, you may lose direction and focus, and end up with a hodge-podge page that visitors may visit once but never again. Remind everyone that the page is going to be on the World Wide Web: This means that it will be viewed and read by possibly millions of people all over the world who will build their only impression of your class members and their interests, your school and where you live, exclusively by reading your class home page. Posting a home page via the Web to the world is awesome, your kids will agree—a responsibility not to be taken lightly.

Display the outline on a bulletin board in your room. On this display, establish a schedule of deadlines: dates by which text has to be completed, when links have to

be identified and coded, when the home page will have its test run, when the home page will be reviewed and modified, when links have to be updated or maintained.

Assign different parts of the project to different groups of students according to their stated interests. Allow everyone to work with as many different parts of the project—organization, text, coding, graphics, proofing, etc.—as they like, so that they can exercise their talents and skills and take ownership of the finished product.

Here's a check list of some of the groups you'll probably need:

- project coordinator (to help you keep up with everybody else)
- information and picture gatherers
- copy writers
- coders (taggers or HTMLers)
- editors
- proof-readers
- computer file maintenance staff
- page designers and layout artists
- artists and graphics designers
- interactors with other interested parties (other classes, the principal, parents)
- page uploaders
- page monitors, reviewers, and maintainers
- Webmaster(s)
- technical interfacers to work with the people who maintain the server you intend to use

You will certainly need a group to communicate with the people in charge of your intended server, whether your own school's systems technicians or Wentworth or a nearby university or a regional freenet or some other on-ramp to the Information Superhighway. The job of this group is (a) to establish your right to upload and (b) the protocol for uploading your home page on their server.

The group that maintains the computer files during the building process exercise critical hands-on responsibility. Not only must they manage the files of the various elements of your home page but also they need to keep a detailed list of all the files, with complete reference to titles and what each title means. This is work for your detail-minded students. For example, on the home page that I made up, there

are 105 separate links or files, each one with a different name. To remember what the files are about, I have a master list of the file names and what each one represents. Because I share Webmaster duties with another faculty member, we would be working at cross-purposes if we did not keep our master list of files up-to-date. Home pages have to be maintained and updated, but who can remember what 105 obscure abbreviations mean, six months after they have been written?

While your students are engaged in all these many activities, even if your kids are mature and responsible, I recommend that you yourself will need eight arms and about the same number of eyes to keep up with all the groups and keep them focused on their tasks. Needless to say, no matter how young or old your students are, how responsible and mature, you, dear teacher, are the Ultimate Webmaster: The buck stops with you.

After the home page is up and running, it will need a hands-on Webmaster, an individual who is responsible in every way for every aspect the active home page. That person will assuredly and ultimately, I repeat, be you yourself, but it would be good developmental instruction for the students to choose the right person from their midst to be the student Webmaster of public record, your associate in this responsibility. Your Webmaster can have as many Associate Webmasters as seems desirable. I suggest rotating the job of Webmaster among the students who are competent to do the work; that way, more people get to learn from the experience what it has to teach.

Your students need to know that the class home page is not a passing fad but a high-stakes project that they are going to stick with throughout the entire year. I suggest that you put a counter on your home page that keeps a record of "hits"—it tabulates how many times your home page has been visited. Seeing those hits accumulate will help to maintain interest on the part of your students. If you get hits enough to prove to a client that your Webpage gets a lot of traffic, you might even sell advertising space on your home page.

Another good way to maintain class interest is to program e-mail boxes into your home page so that visitors can write to all of you. The e-address of the Webmaster needs to be there, of course, but put the e-addresses on your home page of any student who wants to receive e-mail. Every student in your class ought to have his or her own e-mail address, and it ought to be a part of your class's home page. When our children are born, we take out Social Security numbers for them; now, when they come of mental age to be citizens of the world, they get an e-mail address.

Technical production of your home page

After the home page copy has been composed, the pictures and other information gathered and organized, the home page needs to be formatted to be readable by the machine. You will need to teach your students how to put pictures into a correct format for uploading, how to write text files using the word processor, and how to code in HTML. None of this is as difficult as it may sound; the processes are fairly simple ones. The kids who do this work, however, need to be the ones who take instruction well, who have an eye for detail, and who can follow directions.

If you are using a program such as Word on a Macintosh or WordPerfect for Windows, click on "Save As" every time you want to save a document for uploading to your home page. Because the "Save As" function lets you save files in a variety of formats, choose "Text" and then click on OK; your document is thereby saved as a machine-readable text file. Should you happen to forget and not save a document as a text file, it cannot be read on the WWW.

After a document has been word-processed and saved as a text file, put your proofreaders to work. Have them check for errors in content as well as spelling and grammar errors. You may want to have two groups of proofreaders, one for content and organization, another for spelling and grammar. When they have finished proofing a file, make sure that it is saved as a text file once again. You can change text in a document after it has been HTML'd, but it is much easier to make changes while the document is still a simple word-processing file, before it has been coded.

Your artists and HTMLers need to work closely together. The artists help to design the page, while the HTML crew puts in the tags to the text files. You will need to show your artists how to turn their photographs and pictures, whether computer-drawn or hand-drawn, into image files using .gif, .tif, .jpeg, or .mpeg files.

Your HTMLers will need to learn how to code in HyperText Markup Language. Several HTML primers are available, and most of them are easier to understand than the sentence I quoted above from the Netscape *Handbook*. Consult Netscape's on-line pages to find out how to proceed. Browser is a master HTMLer, and he has filled his box with some URLs of places to go to learn how to do HTML.

How to do HTML

Learning HTML
http://www.bev.net/computer/htmlhelp/

A Beginner's Guide to HTML
http://www.ncsa.uiuc.edu/demoweb/html-primer.html#A1.3

HyperText Markup Language (HTML): Working and Background Materials
http://www.w3.org/hypertext/WWW/MarkUp/MarkUp.html

The Web66 Cookbook
http://web66.coled.umn.edu/Cookbook/contents.html
Gives a good set of HTML lessons.

Choose the guide that is best for your HTMLers and for yourself. If you do have a good group of direction-followers who can read documents, make sense of them, and put the directions to use, they should be able to work with any of the above documents on HTML. HTML is not a difficult language or code to learn, but you, too, need to learn it, so that you can communicate with your HTML class experts. You cannot leave this task to your HTMLers alone; they will need your assistance, especially the first time they start to code. Below I offer a few basics on HTML to get you started, but to get good at it, you need to consult the sources in the box, above.

Home pages require a lot of feeding, watering, and tending; therefore, your maintenance group, including your Webmaster(s), will become more important over the long term. There are times when I do not have the time to do the needed maintenance on my own home page. When, however, the information on a home page becomes dated and incorrect, we are definitely no longer putting our best foot forward! Look at the bottom of any home page and you will probably see a date. This date tells you the last time the page was updated. This is important if you are trying to get the most recent information. If you have date-sensitive information or links on your home page, you will feel the need for timely maintenance even more—possibly on a weekly or even daily basis. (I'm not exaggerating! Some home pages are updated every day. My home page gets updated once a semester.) If, for example, your home page talks about a Big Event that's going to happen in the spring, and now it's already late summer and heading into fall, it's past time for some home page maintenance. Avoid date-sensitive links, and you lower the pressure level.

Evaluation

The finished home page with an address on the WWW is but one piece of evidence that the project was successful, the public piece. Less obvious, but more important, are the skills that have been communicated and practiced: group participation, cooperation, and collaboration; writing, drawing, and layout design; proofreading, spelling, and coding skills; the ability to follow directions; the honing of attention to precise work; and the individual personal responsibility required to achieve presentable work for public display. Your class will have met a full spectrum of opportunities to learn in every aspect of the curriculum. Putting a home page up on the Web gives new meaning to the phrase "across the curriculum."

HTML Basics

At the beginning of this chapter you saw some HTML coding—the **A** for anchor, **<>**, the **/**, and **HREF=**. There are several more codes, most of them are alliterative in nature, i.e., "**BL**" stands for "blink." Users do not see any of these codes or tags when viewing your home page—unless they ask Netscape to reveal your "source" code. In order to remember what each of your codes stands for, you can put a parenthetical comment at the end of the tag, saying what you intend for that code to do. As an example:

```
<a href="http://egc.gif">"Picture of Eileen"/a/><p>
```

(A picture of Eileen Cotton will appear at this spot). This means you are anchoring an image or .gif file in this case, of yours truly, and it will be titled "Picture of Eileen." The use of a (parenthetical remark) at the end of a tag, reminds you and your Webmasters of what is on each file.

HTML is not case sensitive. You may use upper-case letters, lower-case letters, or a combination of upper- and lower-case letters when you are composing tags. What you must not do is forget the <> or / marks. If even one > mark is left off, the tag will not be read correctly, and the document will not appear as you want it to appear. Watching for paired sets of bookends is one way that your proofreaders will prove their diligence.

HTML code is easy

```
<b>TEXT THAT YOU WANT BOLDED</b>

<bl>TEXT YOU WANT TO BLINK</bl>

<center>TEXT THAT YOU WANT CENTERED</center>

<i>TEXT THAT YOU WANT ITALICIZED</i>
```

<hr>_____</hr> (horizontal line)

_____(line break)_____</br>

ITEMS IN A LIST THAT YOU WANT KEPT IN NUMERICAL ORDER ("ol" stands for "ordered list.")

ITEMS IN A LIST THAT YOU WANT NOT TO BE KEPT IN NUMERICAL ORDER ("ul" stands for "unordered list.")

<a href=ADDRESS OF A HYPERTEXT LINK IN ANOTHER DOCUMENT [FILENAME OF A HYPERTEXT LINK IN ANOTHER DOCUMENT] (The code to use when you want to a-for-anchor a hotlink to another address in another file; "href" stands for "http reference.")

<p>—the only non-bookend code, is like a double carriage return in word-processing, and goes at the end of every paragraph to indicate a paragraph break at that point. So, at the end of this paragraph, if I were HTMLing, I would type <p> to tell the browser to put in a double carriage return here and start a new paragraph.<p>

When you want to achieve multiple effects, you place the HTML codes side by side, as follows:

<h6>**TEXT THAT YOU WANT IN THE LARGEST TYPE SIZE AND BOLDED**</h6>

Don't try to save space by putting commands together inside the same set of angled brackets, like this: <h1b>this won't work</h1b>. HTML will not know what you are talking about. Do not put a space in anywhere in a string of HTML code.

The type sizes and fonts are quite limited in HTML, so you'll have to be clever in their use to give your home page its own special look. The word on the street is that the Netscape people are working on a better version of the program that will allow for better typography.

Six sizes of type in HTML

<h1>MAIN TITLE</h1>

(If you have Netscape programmed to read everything in size 12, this main title will be about font size 36.)

<h2>SMALL TITLE<h2>

<h3>SUB-HEAD</h3>

<h4>SUB-SUB-HEAD</h4>

<h5>SUB-SUB-SUB-HEAD</h5>

<h6>THE SMALL PRINT</h6>

(The small print will be about font size 10)

If you like this sort of thing, HTML is fun, but if you'd rather take the lazy way out, programs are available that code text files automatically in HTML. I have used a couple of them, but they seem to be more difficult to use than the keys on the keyboard when doing simple coding. If you want to try an HTML program, you can easily download them by means of an anonymous ftp. This is one ftp to which you do not have to subscribe, and it is easy to download.

How to get a free HTML generator

For PCs with Windows:

Anonymous ftp: **ftp.einet.net**

Directory: */einet/pc/ANT_HTML.ZIP*

For Macintoshes:

Anonymous ftp: **ftp.reed.edu**

Directory: */pub/src/html-helper-mode.tar.Z*

or

Anonymous ftp: **info.cern.ch**

Directory: */pub/www/contrib/hm—html-menus-4.1.tar.gz*

or

Anonymous ftp: **sunsite.unc.edu**

Directory: */pub/Linux/apps/editors/emacs/hm—html-menus-4.1.tar.gz*

Lastly, I recommend that you check out the following site for more information in case you feel you need it:

HTML Developer's JumpStation on the WWW—
http://oneworld.wa.com/htmldev/devpage/dev-page.html

or

http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLQuickRef.html

(although the last time I tried this address, I got a "404 Not Found.")

This well-organized collection of tools, guides, articles, and techniques used on the Web will spark all kinds of ideas for you.

One of the best ways to see how a home page looks in HTML is to reveal it in HTML source code. This is easy to do in Netscape. While viewing a home page, pull down the VIEW menu on your screen, click on SOURCE, and the source document of that home page will appear. Study the codes embedded in the text to see how HTML code causes a home page to look the way you want it to on the screen. In Browser's box are a few easy home pages to check out as a way to get headstart on HTML. Then, if you see something that you like, cannibalize it! You are at liberty to copy at will HTML source code, modify it, and use it on your home page. It's not copyrighted, and it's free for the taking. I did a lot of HTML cannibalzing to generate the first few files I developed.

Reveal source

The Peregrine Falcon Fact Sheet

http://ksi.cpsc.ucalgary.ca/falcon/factsheet.html

The Media Literacy OnLine Project

http://interact.uoregon.edu/MediaLit/HomePage

Simple home pages with links to other pages, good models, easy to follow.

Your home page can be simple or complex. Start with easy stuff, and then as your class builds confidence and skill, blast off from there. It may seem slow, at first, but new use of ability always is tedious at the beginning. Don't be afraid to try new things—no point in being boring! By the way, I learned HTML and set up the home page for my department at Chico State in three weeks. My personal home page piggybacks on the home page of my department, which piggybacks on the home page of my university. Nevertheless, I have my own unique URL—

http://www.csuchico.edu/educ/egc.html

—call it up to see my picture, office hours, office phone, and whether I have my act together for my courses. If I could do it, you can do it, too!

How to publish your own home page

To publish pages on the Internet, you will submit your pages to a server computer using server software. Few or many options may be open to you, so the first

thing to do is find out who is willing to publish your home page. If you are part of a freenet or school system that has home page space available, find out their requirements and start HTML'ing right away. You may also have two Webpages published for free by Wentworth, the people who bring you *Classroom Connect*—

http://www.wentworth.com/classweb/info.htm

To find other sites that will publish your Webpage, do a WebCrawler search for "free Web space." When I did it in August, 1995, I got over 1700 hits. Not all of them were free, but some of them are; and for a small fee, many servers out there are available to publish your home page. One of these free sites, and they give you lots of help and make it as easy as possible, is **http://gnn.com/netizeus/index.html**
This site has several elementary school home pages as well as individual home pages.

You now know as much as I do about the Internet. Hope you had fun learning! When you get your class home page up and running, send me some e-mail—**ecotton@oavax.csuchico.edu**—and tell me about your e-class. I want to know whether you found this chapter and this book helpful. Your comments and suggestions to improve them and the course I teach on "teaching with the Internet" will be most welcome. See you on the Web!

SELECT BIBLIOGRAPHY, 1994– EARLY 1995

Aboba, Bernard (1994). *The Online User's Encyclopedia: Bulletin Boards and Beyond.* Addison-Wesley. (806 pages, $34.95, ISBN 0-201-62214-9)

Armstrong, Sara (1995). *Telecommunications in the Classroom*, second edition. Palo Alto, California: Computer Learning Foundation. (188 pages)

Brown, David K. (1994). *Children's Literature Web Guide: Internet Resources to Books for Children and Young Adults.* Calgary: D.K. Brown.

Butler, Mark (1994). *How to Use the Internet.* Emeryville, California: Ziff-Davis Press, (145 pages, $17.95, ISBN -056276-222-2)

Classroom Companion Netbook Series (1995). Lancaster, Pennsylvania Wentworth Worldwide Media, Inc. **connect@wentworth.com**

Volume 1: *Internet Basics for Educators: The Step by Step Guide to Using the Internet.* (96 pages, $12.95, ISBN 0-932577-17-1)

Volume 2: *Educator's Guide to Searching the Internet: How to Locate Educational Treasures on the Internet.* (93 pages, $12.95, ISBN 0-932577-18-0)

Volume 3: *Educator's Guide to Using E-mail: Global Communications for Classroom Success.* (96 pages, $12.95, ISBN 0-932577-19-9)

Volume 4: *Educator's Guide to Internet Classroom Projects: Creating and Participating in Online Projects.* (96 pages, $12.95, ISBN 0-932577-20-2)

Classroom Connect Yearbook 1994-1995, Vol. 1. (3-ring binder, $29.95 or hardcover, $39.95).

Educator's Internet Companion: Classroom Connect's Complete Guide to Educational Resources on the Internet. (271 pages + 1 disk & videotape, $39.99, ISBN 0-932577-10-5)

Educator's Internet Funding Guide: Classroom Connect's Reference Guide for Technology Funding. (over 200 pages, $44.95, ISBN 0-932377-13-X)

Eddings, Joshua (1994). *How the Internet Works.* Emeryville, California: Ziff-Davis Press. (218 pages, $24.95, ISBN 1-56276-192-7)

Ellsworth, Jill H. (1994). *Education on the Internet: A Hands-on Book of Ideas, Resources, Projects, and Advice.* Indianapolis, Indiana: Sams Publishing Company (590 pages, $25.00, ISBN 0-067-30595-X)

Falk, Bennett (1994). *The Internet Roadmap*, second edition. San Francisco. California: Sybex. (300 + pages, $12.99, ISBN: 0-7821-1586-1)

Fraase, Michael (1994). *The PC Internet Tour Guide—Cruising the Internet the Easy Way.* Ventana Press. (288 pages + 1 disk, $24.95, ISBN 1-56604-081-7)

Fraase, Michael (1995). *The Windows Internet Tour Guide—Cruising the Internet the Easy Way*, second edition. Ventana Press. (400 pages + 1 disk, $29.95, ISBN 1-566004-174-0)

Frazier, Deneen, Barbara Kurshan, and Sara Armstrong (1995). *Internet (and More) for Kids.* San Francisco, California: Sybex. (314 pages, $16.95, ISBN 0-7821-1517-9)

Glossbrenner, Alfred (1995). *The Little Online Book.* Berkeley, California: Peachpit Press. ($17.95, ISBN 1-56609-130-6)

Hahn, Harley and Rick Stout (1995). *The Internet Yellow Pages*, second edition. New York: Osborne McGraw-Hill. (812 pages, $29.95, ISBN 0-07-882098-7)

Harris, Judi (1994). *Way of the Ferret: Finding Educational Resources on the Internet*, revised edition. Eugene, Oregon: International Society for Technology in Education. (191 pages, $24.95, ISBN 0-68-5727-62-9)

Kehoe, Brendan P. (1994). *Zen and the Art of the Internet—A Beginner's Guide.* Prentice Hall. (193 pages, $23.95, ISBN 0-13-12111492-6)

Kent, Peter (1994). *The Complete Idiot's Guide to the Internet.* Indianapolis, Indiana: Alpha Books. (367 pages, $19.95, ISBN 1-567-61535-X)

Krol, Ed (1994). *The Whole Internet—User's Guide & Catalog*, second edition. Sebastapol, California: O'Reilly & Associates. (376 pages, $24.95, ISBN 1-56592-063-5)

LeQuey, Tracey with Jeanne C. Ryer (1993). *The Internet Companion—A Beginner's Guide to Global Networking*, second edition. Addison-Wesley. (192 pages, $12.95, ISBN 0-201-40766-6)

Marsh, Merle (1995). *Everything You Need to Know (but Were Afraid to Ask Kids) about the Information Highway*. Palo Alto, California Computer Learning Foundation. (102 pages)

Miller, Elizabeth (1994). *The Internet Resource Directory for K-12 Teachers*. Englewood, Colorado: Libraries Unlimited (199 pages, $29.75, ISBN 1-563-08337-X)

National Research Council (1994). *Realizing the Information Future—The Internet and Beyond*. National Academy Press. (301 pages, $24.95, ISBN 0-309-05044-8)

Pedersen, Ted and Francis Moss (1995). *Internet for Kids: A Beginner's Guide to Surfing the Net*. Los Angeles: Price Stern Sloan. (206 pages, $8.95, ISBN 0-843-3139-57-9)

Sachs, David and Henry Stair (1994). *Hands-On Internet—A Beginning Guide for PC Users*. Prentice Hall. (275 pages, $29.95, ISBN -013-056392-7)

Shea, Virginia (1995). *Netiquette*. Albion Books. (160 pages, $19.95, ISBN 0-9637025-1-3)

Shepp, Debra (1995). *Kidnet: The Kid's Guide to Surfing through Cyberspace*. New York: HarperCollins. (224 pages, $12.00, ISBN 0-06273-380-X)

Turlington, Shannon R. (1995). *Kids Internet 500*. North Carolina: Ventana Press. ($39.95, ISBN 1-566-04324-7)

Wiggins, Richard W. (1994) *The Internet for Everyone: A Guide for Users and Providers*. New York: McGraw-Hill, Inc. (650+ pages, $29.95, ISBN 0-07-067019-6)

Some Commercial Online Services in the U.S. and Canada

Service	America OnLine	CompuServe	GEnie	Prodigy	eWorld	Microsoft Network
Phone #	800-827-6364	800-848-8199	800-638-9636	800-776-0845	800-775-4556	800-386-5550
Access from USA	yes	yes	yes	yes	yes	yes
Access from Canada	yes	yes	yes	yes	yes, 6 provinces	yes, via long-distance call[4]
Access from Mexico	yes	yes	yes (public data network	no	yes, 4 cities	yes, via long distance call[4]
Access from other countries[1]	40+[2]	126 countries	20 countries	2 countries	59 countries	not yet
Blocked to start with	yes	no—working on it	no	yes	24 hr monitors[3]	"Security tokens"[5]
Homework Hotline/Helpline	Yes, educational assistance for parents & kids	Indirectly at Student Forum	Indirectly at The Learning Center	Homework Helpers downloadable software	Indirectly at The Learning Center	no
Internet Access with http	AOL software	CompuServe software	GEnie Software	Prodigy Software	eWorld Software	yes
Internet Access with gopher	yes	yes	yes	yes	yes	yes
Internet Access with FTP	yes	yes	yes	yes	yes	yes
Internet Access with Telnet	no	yes	no	no	no, but working on it	yes

[1]Access from countries including the U.S., Canada, and Mexico
[2]Any country with SprintNet access has America OnLine access
[3]24 hr monitor on all chat lines; a code of ethics that everyone is asked to follow; if you feel someone is not obeying the code, you may call the monitors and ask for appropriate action to be taken.
[4]Access is possible, but through a long-distance call, at this time; working on easier access
[5]"Adult" sites are automatically blocked until the customer identifies him/herself as over 18.

Service	America OnLine	CompuServe	GEnie	Prodigy	eWorld	Microsoft Network
Educational and Related Services Available	Education ERIC Internet Magazines Reference Desk Teachers' Information Center Today's News Weather etc.	Computers Education Center w/forum for subjects, students, disabilities, research, etc. Magazines News References Weather etc.	College Aid Sources Computers Education Center Job Search The Learning Center News & Sports References Space & Science etc.	Education Homework Helper Internet Language Arts News Newsweek Weather etc.	Learning Center Newstand Arts & Liesure Business & Finance Computer Center InfoBooth E-mail Internet OnRamp etc.	Bookshelf Encarta
Chat Line	Kid's OnLine (KOOL) Chat Gateways People Connection	Student Forum	Chat	Chat Rooms	Chat Rooms	yes
E-Mail	yes	yes	yes	yes	yes	yes
Fees	$9.95 / month	$9.95 / month for basic access with 3 hrs. Internet included	$8.95 / month	$9.95 / month	$8.95 / month	$4.95 / month
Hours	5 / month	5 / month	4 / month	5 / month	4 / month	3 / month
Additional charges	$2.95 / hr after first 5 hours	$2.50 / hr after first 5 hours	$3.00 / hr after first 4 hours	$2.95 / hr after first 5 hours	$2.95 / hr. after first 4 hours	$2.50 / hr after first 3 hours
Extra services available (call 800 # for more information)	New-members package	New-members package Extended Services plan	$2.00 / hr surcharge for daytime usage after first 4 hrs	New-members package Different types of membership plans	New-members package	Kid Chat Line
Free startup kit	yes	yes	yes	yes	yes	yes
# members in July, 1995	4 million	3 million	200,000	2 million	100,000	too new to know

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